UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549
FORM 10-K

(Mark One)

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended **December 31, 2019**

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from ______________ to ______________

Commission file number 1-12626

EASTMAN CHEMICAL COMPANY
(Exact name of registrant as specified in its charter)

Delaware	**62-1539359**
(State or other jurisdiction of incorporation or organization)	(I.R.S. employer identification no.)
200 South Wilcox Drive	
Kingsport Tennessee	**37662**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **(423) 229-2000**

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.01 per share	**EMN**	**New York Stock Exchange**
1.50% Notes Due 2023	**EMN23**	**New York Stock Exchange**
1.875% Notes Due 2026	**EMN26**	**New York Stock Exchange**

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.	Yes ☒	No
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act.	Yes	No ☒
Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.	Yes ☒	No
Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).	Yes ☒	No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer", "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. [ ]

	Yes	No
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).	☐	☒

The aggregate market value (based upon the $77.83 closing price on the New York Stock Exchange on June 28, 2019) of the 135,309,680 shares of common equity held by non-affiliates as of December 31, 2019 was $10,531,152,394 using beneficial ownership rules adopted pursuant to Section 13 of the Securities Exchange Act of 1934 to exclude common stock that may be deemed beneficially owned as of December 31, 2019 by Eastman Chemical Company's directors and executive officers and charitable foundation, some of whom might not be held to be affiliates upon judicial determination. A total of 135,993,046 shares of common stock of the registrant were outstanding at December 31, 2019.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement for the 2020 Annual Meeting of Stockholders, to be filed with the Securities and Exchange Commission, are incorporated by reference in Part III, Items 10 to 14 of this Annual Report on Form 10-K (this "Annual Report") as indicated herein.

FORWARD-LOOKING STATEMENTS

Certain statements made or incorporated by reference in this Annual Report are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act (Section 27A of the Securities Act of 1933, as amended and Section 21E of the Securities and Exchange Act of 1934, as amended). Forward-looking statements are all statements, other than statements of historical fact, that may be made by Eastman Chemical Company ("Eastman" or the "Company") from time to time. In some cases, you can identify forward-looking statements by terminology such as "anticipates", "believes", "estimates", "expects", "intends", "may", "plans", "projects", "will", "would", and similar expressions or expressions of the negative of these terms. Forward-looking statements may relate to, among other things, such matters as planned and expected capacity increases and utilization; anticipated capital spending; expected depreciation and amortization; environmental matters and opportunities (including potential risks associated with physical impacts of climate change and related voluntary and regulatory carbon requirements); exposure to, and effects of hedging of, raw material and energy prices and costs; foreign currencies and interest rates; disruption or interruption of operations and of raw material or energy supply; global and regional economic, political, and business conditions; competition; growth opportunities; supply and demand, volume, price, cost, margin and sales; pending and future legal proceedings; earnings, cash flow, dividends, stock repurchases and other expected financial results, events, decisions, and conditions; expectations, strategies, and plans for individual assets and products, businesses, and operating segments, as well as for the whole of Eastman; cash requirements and uses of available cash; financing plans and activities; pension expenses and funding; credit ratings; anticipated and other future restructuring, acquisition, divestiture, and consolidation activities; cost reduction and control efforts and targets; the timing and costs of, benefits from the integration of, and expected business and financial performance of acquired businesses as well as the subsequent impairment assessments of acquired long-lived assets; strategic, technology, and product innovation initiatives and development, production, commercialization and acceptance of new products, services and technologies and related costs; asset, business, and product portfolio changes; and expected tax rates and interest costs.

Forward-looking statements are based upon certain underlying assumptions as of the date such statements were made. Such assumptions are based upon internal estimates and other analyses of current market conditions and trends, management expectations, plans, and strategies, economic conditions, and other factors. Forward-looking statements and the assumptions underlying them are necessarily subject to risks and uncertainties inherent in projecting future conditions and results. Actual results could differ materially from expectations expressed in the forward-looking statements if one or more of the underlying assumptions and expectations proves to be inaccurate or is unrealized. The most significant known factors, risks, and uncertainties that could cause actual results to differ materially from those in the forward-looking statements are identified and discussed under "Management's Discussion and Analysis of Financial Condition and Results of Operations - Risk Factors" in Part II, Item 7 of this Annual Report. Other factors, risks or uncertainties of which management is not aware, or presently deems immaterial, could also cause actual results to differ materially from those in the forward-looking statements.

The Company cautions you not to place undue reliance on forward-looking statements, which speak only as of the date such statements are made. Except as may be required by law, the Company undertakes no obligation to update or alter these forward-looking statements, whether as a result of new information, future events, or otherwise. Investors are advised, however, to consult any further public Company disclosures (such as filings with the Securities and Exchange Commission, Company press releases, or pre-noticed public investor presentations) on related subjects.

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PART I

ITEM 1. BUSINESS

CORPORATE OVERVIEW

Eastman Chemical Company ("Eastman" or the "Company") is a global advanced materials and specialty additives company that produces a broad range of products found in items people use every day. Eastman began business in 1920 for the purpose of producing chemicals for Eastman Kodak Company's photographic business and became a public company, incorporated in Delaware, on December 31, 1993. Eastman has 50 manufacturing facilities and equity interests in three manufacturing joint ventures in 15 countries that supply products to customers throughout the world. See Item 2. "Properties" of this Annual Report on Form 10-K (this "Annual Report"). The Company's headquarters and largest manufacturing facility are located in Kingsport, Tennessee. With a robust portfolio of specialty businesses, Eastman works with customers to deliver innovative products and solutions while maintaining a commitment to safety and sustainability. Eastman's businesses are managed and reported in four operating segments: Additives & Functional Products, Advanced Materials, Chemical Intermediates, and Fibers. See "Business Segments".

In the first years as a stand-alone company, Eastman was diversified between commodity and more specialty chemical businesses. Beginning in 2004, the Company refocused its strategy and changed its businesses and portfolio of products, first by the divestiture and discontinuance of under-performing assets and commodity businesses and initiatives (including divestiture in 2004 of resins, inks, and monomers product lines, divestiture in 2006 of the polyethylene business, and divestiture from 2007 to 2010 of the polyethylene terephthalate assets and business). The Company then pursued growth through the development and acquisition of more specialty businesses and product lines by inorganic acquisition and integration (including the acquisition of Solutia, Inc., a global leader in performance materials and specialty chemicals, in 2012, and Taminco Corporation, a global specialty chemical company, in 2014) and organic development and commercialization of new and enhanced technologies and products.

Eastman currently uses an innovation-driven growth model which consists of leveraging world class scalable technology platforms, delivering differentiated application development capabilities, and relentlessly engaging the market. The Company's world class technology platforms form the foundation of sustainable growth by differentiated products through significant scale advantages in research and development ("R&D") and advantaged global market access. Differentiated application development converts market complexity into opportunities for growth and accelerates innovation by enabling a deeper understanding of the value of Eastman's products and how they perform within customers' and end-user products. Key areas of application development include thermoplastic conversion, functional films, coatings formulations, rubber additive formulations, adhesives formulations, nonwovens and textiles, animal nutrition, and chemical and plastics recycling technologies. The Company engages the market by working directly with customers and downstream users, targeting attractive niche markets, and leveraging disruptive macro trends. Management believes that these elements of the Company's innovation-driven growth model, combined with disciplined portfolio management and balanced capital deployment, will result in consistent, sustainable earnings growth and strong cash flow.

In 2019, the Company reported sales revenue of $9.3 billion, earnings before interest and taxes ("EBIT") of $1.1 billion, and net earnings of $0.8 billion. Diluted earnings per share were $5.48. Net cash provided by operating activities was $1.5 billion. Excluding non-core and unusual items, adjusted EBIT was $1.4 billion and adjusted diluted earnings per share were $7.13. See "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7 of this Annual Report for reconciliation of financial measures under accounting principles generally accepted in the United States ("GAAP") to non-GAAP financial measures, description of excluded items, and related information. For Company sales revenue by end-market, see Exhibit 99.01 "2019 Company and Segment Sales Revenue by End-Use Market" of this Annual Report. Approximately 60 percent of 2019 sales revenue was generated from outside the United States and Canada region. For additional information regarding sales by customer location and by segment, see Note 19, "Segment and Regional Sales Information", to the Company's consolidated financial statements in Part II, Item 8, and "Management's Discussion and Analysis of Financial Condition and Results of Operations - Summary by Operating Segment", "Sales by Customer Location", and "Risk Factors" in Part II, Item 7 of this Annual Report.

BUSINESS STRATEGY

Eastman's objective is to be an outperforming specialty chemical company with consistent, sustainable earnings growth and strong cash flow. Integral to the Company's strategy for growth is leveraging its heritage expertise and innovation within its cellulose and acetyl, olefins, polyester, and alkylamine chemistries. For each of these "streams", the Company has developed and acquired a combination of assets and technologies that combine scale and integration across multiple manufacturing units and sites as a competitive advantage. Management uses an innovation-driven growth model which consists of leveraging world class scalable technology platforms, delivering differentiated application development, and relentlessly engaging the market. The Company sells differentiated products into diverse markets and geographic regions and engages the market by working directly with customers and downstream users to meet their needs in existing and new niche markets. Management believes that this innovation-driven growth model will result in consistent financial results by leveraging the Company's proven technology capabilities to improve product mix, increasing emphasis on specialty businesses, and sustaining and expanding leadership in attractive niche markets. A consistent increase in earnings is expected to result from both organic growth initiatives and strategic inorganic initiatives.

Innovation

Management is pursuing specific opportunities to leverage Eastman's innovation-driven growth model for continued near-term and long-term greater than end-market growth by both sustaining the Company's leadership in existing markets and expanding into new markets. Recently developed, introduced, or commercialized innovation products, applications, and technologies include the following:

- Plastic waste feedstock procurement and commercial-scale operations of proprietary innovative chemical recycling carbon renewal technology which breaks down waste plastics into molecular building blocks (carbon monoxide and hydrogen) for feedstocks of acetyl manufacturing stream products.
- Introduction of advanced circular recycling methanolysis technology to depolymerize waste plastics to re-create specialty monomers for use in manufacture of specialty copolyester products sold into a wide array of end markets.
- Eastman CORE (trademark and patent pending), a differentiated analytics-based software platform that provides Eastman's high performance paint protection film and window film product customers and end-users with access to digital service to improve customer experience and accelerate category development.
- Saflex™ E series, an enhanced acoustic interlayer product, is formulated to dampen sound, particularly in the high frequency range, and provides improved performance compared to traditional acoustic interlayers.
- Tetrashield™ performance polyester resins based on proprietary monomer technology with improved performance and sustainability features for automotive coatings, industrial, and food packaging end-users.
- Impera™ tire additives performance resins that enable tire manufacturers to improve the safety and handling of tires, balance tire performance and fuel economy needs, and achieve superior levels of tack for tire construction.
- Naia™, a yarn product for the apparel market developed from Eastman's proprietary cellulose ester technology.
- Regalite™ UltraPure Platform, a new class of tackifying hydrocarbon adhesives resins with enhanced features addressing hygiene end-use product consumer odor, volatile organic compounds and trace chemicals concerns.

Sustainability

Central to Eastman's innovation-driven growth model is our dedication to enhance the quality of life in a material way with a sustainability strategy to create more value than the resources used by innovating to deliver consumer choices that will sustain and protect our world. Management approaches sustainability as a source of competitive strength by focusing its innovation strategy on opportunities where disruptive macro trends align with the Company's differentiated technology platforms and applications development capabilities to develop innovative products, applications, and technologies that enable customers' development and sales of sustainable products. Eastman's sustainability-related growth initiatives include targeted products utilizing technology that enhance end-use product durability, material usage, recyclability, and health and safety impact characteristics to reduce unnecessary waste, pollution, and greenhouse gas emissions associated with climate change.

The Company's long history of technical expertise in chemical processes and polymer science position it to provide innovative solutions to some of the world's most complex problems, contributing to development of a more "circular economy" - an economic system in which resource input and waste generation, emissions, and energy usage are reduced by slowing, closing, and narrowing energy and material loops through long-lasting design, maintenance, repair, reuse, remanufacturing, refurbishing, recycling, and upcycling. The Company's sustainable innovation initiatives include mechanical recycling, biodegradation, gasification, and chemical recycling and strategic collaborations with end-user markets. In 2019, the Company announced its use of its unique platform of solutions to address the challenges of plastic waste in the environment with circular chemical and plastics recycling, carbon renewal, and methanolysis technologies. Eastman's scale and integration provides a unique opportunity to accelerate the use of these advanced circular recycling technologies and make a meaningful positive impact on the environment.

Examples of Eastman sustainable solutions within identified disruptive macro trends include:

- health and wellness: Tritan™ copolyester, Tetrashield™ performance polyester resins, and Vestera™ cellulosic fiber;
- natural resource efficiency: Saflex™ Q series advanced acoustic interlayers, Impera™ high performance resins for tires, and Treva™ proprietary engineering bioplastic;
- emerging middle class: Saflex™ and head-up display ("HUD") acoustic interlayers, Regalite™ hydrocarbon resins, Naia™ cellulosic yarn, and Avra™ performance fibers;
- feeding a growing population: Eastman organic acids, Enhanz™ feed additive, and Banguard™ crop protection; and
- circular economy: carbon renewal and methanolysis chemical and plastics recycling technologies.

The Company leverages core competencies in polyesters, cellulose esters, thermoplastic processing, textile capability, and in-house application expertise for use in a wide range of applications to provide sustainable solutions to markets which are in search of new and improved products.

FINANCIAL STRATEGY

In its management of the Company's businesses and growth initiatives, management is committed to maintaining a strong financial position with appropriate financial flexibility and liquidity. Management believes maintaining a financial profile that supports an investment grade credit rating is important to its long-term strategy and financial flexibility. The Company employs a disciplined and balanced approach to capital allocation and deployment of cash. The priorities for uses of available cash include payment of the quarterly dividend, repayment of debt, funding targeted growth opportunities, and repurchasing shares. Management expects that the combination of continued strong cash flow generation, a strong balance sheet, and sufficient liquidity will continue to provide flexibility to pursue growth initiatives.

BUSINESS SEGMENTS

The Company's products and operations are managed and reported in four operating segments: Additives & Functional Products ("AFP"), Advanced Materials ("AM"), Chemical Intermediates ("CI"), and Fibers. This organizational structure is based on the management of the strategies, operating models, and sales channels that the various businesses employ and supports the Company's continued transformation towards a more specialty portfolio of products. For segment sales revenue and earnings and segment product lines revenues, see Note 19, "Segment and Regional Sales Information", to the Company's consolidated financial statements in Part II, Item 8 and "Management's Discussion and Analysis of Financial Condition and Results of Operations - Summary by Operating Segment" in Part II, Item 7 of this Annual Report. For identification of manufacturing facilities by segment, see Item 2, "Properties" of this Annual Report.

ADDITIVES & FUNCTIONAL PRODUCTS SEGMENT

Overview

In the AFP segment, the Company manufactures chemicals for products in the transportation, consumables, building and construction, animal nutrition, crop protection, energy, personal and home care, and other markets. Key technology platforms in this segment are cellulose esters, polyester polymers, insoluble sulfur, hydrocarbon resins, alkylamine derivatives, and propylene derivatives.

The AFP segment's sales growth is typically above annual industrial production growth due to innovation and enhanced commercial execution with sales to a robust set of end-markets. The segment is focused on producing high-value additives that provide critical functionality but which comprise a small percentage of total customer product cost. The segment principally competes on the differentiated performance characteristics of its products and through leveraging its strong customer base and long-standing customer relationships to promote substantial recurring business and product development. A critical element of the AFP segment's success is its close formulation collaboration with customers through advantaged application development capability.

Principal Products

Product	Description	Principal Competitors	Key Raw Materials	End-Use Applications
Coatings and Inks Additives				
Polymers cellulosics Tetrashield™ polyesters polyolefins Additives and Solvents Texanol™ Optifilm™ ketones esters glycol ethers oxo alcohols	specialty coalescents, specialty solvents, and commodity solvents paint additives and specialty polymers	BASF SE Dow Inc. Oxea Celanese Corporation Alternative Technologies	wood pulp propane propylene	building and construction (architectural coatings) transportation (OEM) and refinish coatings durable goods (wood, industrial coatings and applications) consumables (graphic arts, inks, and packaging)
Adhesives Resins				
Piccotac™ Regalite™ Eastotac™ Eastoflex™ Aerafin™	hydrocarbon resins and rosin resins mainly for hot-melt and pressure sensitive adhesives	Exxon Mobil Corporation Kolon Industries, Inc. Evonik Industries	C9 resin oil piperylene gum rosin propylene	consumables (resins used in hygiene and packaging adhesives) building and construction (resins for construction adhesives and interior flooring)
Tire Additives				
Crystex™	insoluble sulfur rubber additive	Oriental Carbon & Chemicals Limited Shikoku Chemicals Corporation	sulfur naphthenic process oil	transportation (tire manufacturing) other rubber products (such as hoses, belts, seals, and footwear)
Santoflex™	antidegradant rubber additive	Jiangsu Sinorgchem Technology Co., Ltd. Kumho Petrochemical Co., Ltd. Lanxess AG	nitrobenzene aniline methyl isobutyl ketone	transportation (tire manufacturing) other rubber products (such as hoses, belts, seals, and footwear)
Impera™	performance resins	Cray Valley Hydrocarbon Specialty Chemicals Exxon Mobil Corporation Kolon Industries, Inc.	alpha methylstyrene piperylene styrene	transportation (tire manufacturing)

Product	Description	Principal Competitors	Key Raw Materials	End-Use Applications
Care Chemicals				
Alkylamine derivatives Organic acids and derivatives Cellulose esters	amine derivative-based building blocks for production of flocculants intermediates for surfactants	BASF SE Dow Inc. Huntsman Corporation	alkylamines ammonia alcohols ethylene oxide	water treatment personal and home care pharmaceuticals
Specialty Fluids				
Therminol™ Turbo oils Skydrol™ SkyKleen™ Marlotherm™	heat transfer and aviation fluids	Dow Inc. Exxon Mobil Corporation	benzene phosphorous neo-polyol esters	industrial chemicals and processing (heat transfer fluids for chemical processes) renewable energy commercial aviation
Animal Nutrition				
Organic acids and derivatives Choline chloride Enhanz™	organic acid-based solutions	BASF SE Perstorp Holding AB Luxi Chemical Group Feicheng Acid Chemicals	formic acid ethylene oxide propane heavy fuel oil	gut health solutions preservation industrial applications
Crop Protection				
Alkylamine derivatives Banguard™	metam-based soil fumigants thiram and ziram-based fungicides plant growth regulator	Corteva, Inc. Argo-Kanesho Co., Ltd. Bayer AG BASF SE	alkylamines CS2 caustic soda	agriculture crop protection

See Exhibit 99.01 for AFP segment revenue by end-use market.

Strategy

Management applies Eastman's innovation-driven growth model in the AFP segment by leveraging proprietary technologies for the continued development of innovative product offerings and focusing growth efforts on further expanding end-markets such as transportation, building and construction, consumables, industrial applications, animal nutrition, care chemicals, crop protection, and energy. Management believes that the ability to leverage the AFP segment's research, differentiated application development, and production capabilities across multiple markets uniquely positions it to meet evolving needs to improve the quality and performance of its customers' products. For example, tire performance labeling regulations in various parts of the world and competitive pressure favoring performance over cost are causing tire manufacturers to simultaneously improve conflicting tire attributes. Eastman's tire additives technology helps tire manufacturers overcome common compromises often observed between wet grip and rolling resistance. The Company is also developing new technologies such as polyester resins for coatings, sustainable solvents, and hydrocarbon resins for tires to address identified customer and end-user desired features.

Eastman's global manufacturing presence is a key element of the AFP segment's growth strategy. For example, the segment expects to capitalize on industrial growth in Asia from its manufacturing capacity expansion in Kuantan, Malaysia and cellulose ester products sourced from the Company's low-cost cellulose and acetyl manufacturing stream in North America.

In 2019, the AFP segment:

- advanced growth and innovation of Regalite™ UltraPure hydrocarbon resin, a new class of clean tackifying hydrocarbon resins, through a capacity expansion at the Middelburg, Netherlands manufacturing site;
- acquired the Marlotherm™ heat transfer assets in Marl, Germany and the related formulations, intellectual property, and customer contracts, as a targeted addition to the specialty fluids business;
- advanced growth of Impera™ resins through capacity expansions for the production of performance resins for tires at both the Middelburg, Netherlands, and Jefferson, Pennsylvania, manufacturing sites to serve demand from tire manufacturers around the world for product solutions that enable improved safety, efficiency, and performance;
- continued to enhance our ability to serve the global customer base in low volatile organic compound ("VOC") coatings and other markets by completing the final phase of a ketones capacity expansion at the Kingsport, Tennessee manufacturing site in fourth quarter 2019; and
- responded to growing demand for purified water and sustainable waste water treatment across the globe with world scale production units for Dimethylaminoethanol ("DMAE"/"DMEA") in Europe (Belgium) and North America (Louisiana) and decided to expand capacity in China to respond to stricter regulation and rapidly growing demand in Asia (DMAE is used as a key component into flocculants that are critical for municipal and industrial water treatments).

The AFP segment is pursuing specific opportunities to leverage Eastman's innovation-driven growth model to create greater than end-market growth by both sustaining the Company's leadership in existing markets and expanding into new markets. Examples of recent product innovation within the AFP segment include Tetrashield™ performance polyester resins based on proprietary monomer technology, Impera™ high performance resins for tires, Regalite™ UltraPure Platform addressing consumer concerns associated with odor, volatile organic compounds and trace chemicals in the hygiene industry, Aerafin™ polymer developed from proprietary olefin technology, and care chemicals alkylamine derivatives including state-of-the-art water treatment solutions.

In response to market and business conditions, management is evaluating strategic alternatives for certain businesses and product lines within the AFP segment, including certain adhesives resins, tire additives, and animal nutrition products constituting approximately one-third of segment revenue. Options being considered include restructuring and cost management actions, partnerships or other arrangements with third-parties, or divestments.

ADVANCED MATERIALS SEGMENT

Overview

In the AM segment, the Company produces and markets polymers, films, and plastics with differentiated performance properties for value-added end-uses in transportation, consumables, building and construction, durable goods, and health and wellness markets. Key technology platforms for this segment include cellulose esters, copolyesters, and polyvinyl butyral ("PVB") and polyester films.

Eastman's technical, application development, and market development capabilities enable the AM segment to modify its polymers, films, and plastics to control and customize their final properties for development of new applications with enhanced functionality. For example, Tritan™ copolyesters are a leading solution for food contact applications due to their performance and processing attributes and Bisphenol A ("BPA") free properties. The Saflex™ Q Series product line is a leading acoustic solution for architectural and automotive applications. The Company also maintains a leading solar control technology position in the window film market through the use of high performance sputter coatings which enhance solar heat rejection while maintaining superior optical properties. The segment principally competes on differentiated technology and application development capabilities. Management believes the AM segment's competitive advantages also include long-term customer relationships, vertical integration and scale in manufacturing, and leading market positions.

Principal Products

Product	Description	Principal Competitors	Key Raw Materials	End-Use Applications
Specialty Plastics				
Tritan™ copolyester Eastar™ copolyesters Spectar™ copolyester Embrace™ copolyester Visualize™ Eastman Aspira™ family of resins Treva™	standard copolyesters premium copolyesters cellulose esters	Covestro AG Trinseo S.A. Evonik Industries AG Saudi Basic Industries Corporation Mitsubishi Chemical Corporation S.K. Chemical Industries Sichuan Push Acetati Company Limited Daicel Chemical Industries Ltd.	paraxylene ethylene glycol cellulose purified terephthalic acid	consumables (consumer packaging, cosmetics packaging, in-store fixtures and displays) durable goods (consumer housewares and appliances) health and wellness (medical) electronics (displays)
Advanced Interlayers				
Saflex™ Saflex™ Q Series Saflex™ ST Saflex™ E Series	standard PVB sheet premium PVB sheet	Sekisui Chemical Co., Ltd. Kuraray Co., Ltd. Kingboard (Fo Gang) Specialty Resins Limited Chang Chun Petrochemical Co., Ltd.	polyvinyl alcohol vinyl acetate monomer butyraldehyde 2-ethyl hexanol ethanol triethylene glycol	transportation (automotive safety glass, automotive acoustic glass, and HUD) building and construction (PVB for architectural interlayers)
Performance Films				
LLumar™ Flexvue™ SunTek™ V-KOOL™ Gila™	window film and protective film products for aftermarket applied films	3M Company Saint-Gobain S.A. Beijing Kangde Xin Composite Material Co., Ltd. (KDX) XPEL, Inc.	polyethylene terephthalate film	transportation (automotive after-market window film and paint protection film) building and construction (residential and commercial window films) health and wellness (medical)

See Exhibit 99.01 for AM segment revenue by end-use market.

Strategy

Management applies Eastman's innovation-driven growth model in the AM segment by leveraging innovation and technology platforms into new and multi-generational products and applications to accelerate AM segment growth and leverage its manufacturing capacity. The segment continues to expand its portfolio of higher margin products in attractive end-markets. Through Eastman's advantaged asset position and expertise in applications development, management believes that the AM segment is well positioned for continued future growth. The advanced interlayers product lines, including acoustic and HUD sheet interlayer products, leverage Eastman's global presence to supply industry leading innovations to automotive and architectural end-markets by collaborating with global and large regional customers. In the automotive end-market, the performance films product line has industry leading technologies, recognized brands, and what management believes is one of the largest distribution and dealer networks which, when combined, position Eastman for further growth, particularly in leading automotive markets such as North America and Asia. The segment's product portfolio is aligned with underlying energy efficiency trends in both automotive and architectural markets. Additionally, the AM segment is positioned to benefit from recent Eastman polyesters stream sustainability innovations by leveraging advanced circular recycling technology to enable various waste plastics to be recycled into specialty copolyester products.

The AM segment expects to continue to improve its product mix from increased sales of premium products, including Tritan™ copolyester, Visualize™ material, Saflex™ Q acoustic series, Saflex™ HUD interlayer products, LLumar™, V-KOOL™, and SunTek™ window and protective films.

In 2019, the AM segment:

- continued the growth of Tritan™ copolyester in the durable goods and health and wellness markets, supported by continued market and application development;
- strengthened growth in automotive paint protection films in North America and China through an improved sales channel, marketing, and commercial execution strategies and capabilities;
- finalized development and announced the launch of Eastman CORE (trademark and patent pending) next generation analytics-based software platform for automotive window and paint protection film products, enabling more efficient application and overall business management for dealers; and
- developed and enhanced Eastman's sustainability capabilities and commercial opportunities, including strategic collaborations with third parties to secure a consistent source of recyclable copolyester feedstock and to innovate new sustainable specialty plastic solutions.

The AM segment is pursuing specific opportunities to leverage Eastman's innovation-driven growth model to create greater than end-market growth by both sustaining the Company's leadership in existing markets and expanding into new markets. Product innovation continues to be a focus, including the recent introduction of Treva™, a cellulose-based engineering bioplastic.

CHEMICAL INTERMEDIATES SEGMENT

Overview

The CI segment leverages large scale and vertical integration from the cellulose and acetyl, olefins, and alkylamines streams to support the Company's specialty operating segments with advantaged cost positions. The CI segment sells excess intermediates beyond the Company's internal specialty needs into markets such as industrial chemicals and processing, building and construction, health and wellness, and agrochemicals. Key technology platforms include acetyls, oxos, plasticizers, polyesters, and alkylamines.

The CI segment product lines benefit from competitive cost positions primarily resulting from the use of and access to lower cost raw materials, and the Company's scale, technology, and operational excellence. Examples include coal used in the production of cellulose and acetyl stream product lines, feedstocks used in the production of olefin derivative product lines such as oxo alcohols and plasticizers, and ammonia and methanol used to manufacture methylamines. The CI segment also provides superior reliability to customers through its backward integration into readily available raw materials, such as propane, ethane, coal, and propylene. In addition to a competitive cost position, the plasticizers business expects to continue to benefit from the growth in relative use of non-phthalate rather than phthalate plasticizers in the United States, Canada, and Europe.

Several CI segment product lines are affected by cyclicality, most notably olefin and acetyl-based products. See "Eastman Chemical Company General Information - Manufacturing Streams". This cyclicality is caused by periods of supply and demand imbalance, when either incremental capacity additions are not offset by corresponding increases in demand, or when demand exceeds existing supply. While management continues to take steps to reduce the impact of the trough of these cycles, future results are expected to occasionally fluctuate due to both general economic conditions and industry supply and demand.

Principal Products

Product	Description	Principal Competitors	Key Raw Materials	End-Use Applications
Intermediates				
Oxo alcohols and derivatives Acetic acid and derivatives Acetic anhydride Ethylene Glycol ethers Esters	Olefin derivatives, acetyl derivatives, ethylene, commodity solvents	Lyondell Bassell, BASF SE Dow Inc. Oxea BP plc Celanese Corporation Lonza Ineos Group Holdings S.A. Indorama Ventures Public Company Limited	propane ethane propylene coal natural gas paraxylene metaxylene	industrial chemicals and processing building and construction (paint and coating applications, construction chemicals, building materials) pharmaceuticals and agriculture health and wellness packaging
Plasticizers				
Eastman 168™ DOP Benzoflex™ TXIB™ Effusion™	primary non-phthalate and phthalate plasticizers and a range of niche non-phthalate plasticizers	BASF SE Exxon Mobil Corporation LG Chem, Ltd. Emerald Performance Materials	propane propylene paraxylene	building and construction (non-phthalate plasticizers used in interior surfaces) consumables (food packaging, packaging adhesives, and glove applications) health and wellness (medical devices)
Functional Amines				
Alkylamines	methylamines and salts higher amines and solvents	BASF SE US Amines Limited Oxea GmbH	methanol ammonia acetone ethanol butanol	agrochemicals energy consumables water treatment animal nutrition industrial intermediates

See Exhibit 99.01 for CI segment revenue by end-use market.

Strategy

To maintain and enhance its status as a low-cost producer and optimize earnings, the CI segment continuously focuses on cost control, operational efficiency, and capacity utilization. This includes focusing on products used internally by other operating segments, thereby supporting growth in specialty product lines throughout the Company, and also external licensing opportunities. Through the CI segment, the Company has leveraged the advantage of its highly integrated manufacturing facilities. The Kingsport, Tennessee manufacturing facility allows for the production of acetic anhydride and other acetyl derivatives from coal rather than natural gas or other petroleum feedstocks. At the Longview, Texas manufacturing site, Eastman uses its proprietary oxo technology in one of the world's largest single-site oxo butyraldehyde manufacturing facilities to produce a wide range of alcohols and other derivative products utilizing local propane and ethane supplies and purchased propylene. The Pace, Florida manufacturing facility, which uses ammonia and methanol feedstocks, is the largest methylamine production site in the world. These integrated facilities, combined with large scale production processes and a continuous focus on additional process improvements, allow the CI segment product lines to remain cost competitive and, for some products, cost-advantaged as compared to competitors.

In 2018, the Company completed modifications to the olefin cracking units at the Longview, Texas manufacturing site. These modifications allowed for the introduction of refinery-grade propylene ("RGP") into the feedstock mix while also reducing the amount of other purchased feedstocks. This feedstock shift resulted in a significant decrease in ethylene production and excess ethylene sales in 2019, while maintaining historical levels of propylene production. The RGP project provided the flexibility to significantly reduce the Company's participation in the merchant ethylene market, while retaining a cost-advantaged integrated propylene position to support specialty derivatives throughout the Company.

FIBERS SEGMENT

Overview

In the Fibers segment, Eastman manufactures and sells Estron™ acetate tow and Estrobond™ triacetin plasticizers for use in filtration media, primarily cigarette filters; Estron™ natural (undyed), Chromspun™ solution-dyed acetate yarns, Naia™ cellulosic fibers and yarn for use in apparel, home furnishings, and industrial fabrics; nonwovens for use in filtration and friction media, used primarily in transportation, industrial, and agricultural markets; and cellulose acetate flake and acetyl raw materials for other acetate fiber producers. Eastman is one of the world's two largest suppliers of acetate tow and has been a market leader in the manufacture and sale of acetate tow since it began production in the early 1950s. The Company is the world's largest producer of acetate yarn and has been in this business for over 85 years.

The largest 10 Fibers segment customers accounted for approximately 70 percent of the segment's 2019 sales revenue, and include multinational as well as regional cigarette producers, fabric manufacturers, and other acetate fiber producers.

The Company's long history and experience in fibers markets are reflected in the Fibers segment's operating expertise, both within the Company and in support of its customers' processes. The Fibers segment's knowledge of the industry and of customers' processes allows it to assist its customers in maximizing their processing efficiencies, promoting repeat sales, and developing mutually beneficial, long-term customer relationships.

The Company's fully integrated fibers manufacturing process employs unique technology that allows it to use a broad range of high-purity wood pulps for which the Company has dependable sources of supply.

Contributing to profitability in the Fibers segment is the limited number of competitors and significant barriers to entry. These barriers include, but are not limited to, high capital costs for integrated manufacturing facilities.

The Fibers segment's competitive strengths include a reputation for high-quality products, technical expertise, large scale vertically-integrated processes, reliability of supply, internally produced acetate flake supply for Fibers segment's products, a reputation for customer service excellence, and a customer base characterized by strategic long-term customer and end-user relationships. The Company continues to capitalize and build on these strengths to further improve the strategic position of its Fibers segment. In response to challenging acetate tow market conditions, including additional industry capacity and lower capacity utilization rates, the Company has taken actions in recent years expected to stabilize segment earnings including, establishing long-term acetate tow customer arrangements and agreements, development of innovative textile and nonwoven applications, and repurposing manufacturing capacity from acetate tow to new products.

Principal Products

Product	Description	Principal Competitors	Key Raw Materials	End-Use Applications
Acetate Tow				
Estron™	cellulose acetate tow	Celanese Corporation Rhodia Acetow Daicel Corporation	wood pulp methanol high sulfur coal	filtration media (primarily cigarette filters)
Acetyl Chemical Products				
Estrobond™	triacetin cellulose acetate flake acetic acid acetic anhydride	Jiangsu Ruijia Chemistry Co., Ltd. Polynt SpA Daicel Corporation Celanese Corporation Rhodia Acetow	wood pulp methanol high sulfur coal	filtration media (primarily cigarette filters)
Acetate Yarn				
Estron™ Chromspun™ Naia™	natural (undyed) acetate yarn solution dyed acetate yarn	UAB Dirbtinis Pluostas Lenzing AG ENKA International GmbH & Co. KG	wood pulp methanol high sulfur coal	consumables (apparel, home furnishings, and industrial fabrics) health and wellness (medical tape)
Nonwovens				
Nonwovens Vestera™ Celluosic Fiber	wetlaid nonwoven media specialty and engineered papers cellulose acetate fiber	Hollingsworth and Vose Company Lydall, Inc. BorgWarner Inc. Lenzing AG	natural and synthetic fibers inorganic and metallic additives resins	filtration and friction media for transportation industrial agriculture and mining aerospace markets personal hygiene consumables

Strategy

Management applies the innovation-driven growth model in the Fibers segment by leveraging its strong customer relationships and industry knowledge to maintain a leading industry position in the global market. The segment benefits from a state-of-the-art, world class, acetate flake production facility at the Kingsport, Tennessee site, which is supplied from Eastman's vertically integrated coal gasification facility and is the largest and most integrated acetate tow site in the world. Eastman's global acetate tow capacity is approximately 150,000 metric tons, not including the Company's participation in an acetate tow joint venture manufacturing facility in China. The Company supplies 100 percent of the acetate flake raw material to the China manufacturing joint venture from the Company's manufacturing facility in Kingsport, Tennessee, which the Company recognizes in sales revenue. The Company recognizes earnings in the joint venture through its equity investment, reported in "Other (income) charges, net" in the Consolidated Statements of Earnings, Comprehensive Income and Retained Earnings in Part II, Item 8 of this Annual Report. The Company's focus on innovation has resulted in repurposing some of its acetate tow manufacturing capacity to fibers products for textiles and nonwovens markets, resulting in increased capacity utilization and lower acetate tow costs.

The Company makes use of its capabilities in fibers technology to maintain a strong focus on incremental product and process improvements, with the goals of meeting customers' evolving needs and further improving the segment's manufacturing process efficiencies.

The Fibers segment R&D efforts focus on serving existing customers, leveraging proprietary cellulose ester and spinning technology for differentiated application development in new markets, optimizing asset productivity, and working with suppliers to reduce costs. For acetate tow, these efforts are assisting customers in the effective use of the segment's products and customers' product development efforts. Beyond acetate tow, management is applying the innovation-driven growth model to leverage its fibers technology and expertise to focus on innovative growth in the textiles and nonwovens markets. Examples of recent product innovation within the Fibers segment include Naia™ yarn for the apparel market developed from Eastman's proprietary cellulose ester technology; Avra™ performance fibers for the apparel, home furnishings and industrial fabrics markets developed from a combination of Eastman proprietary spinning technology and polymer chemistry enabling unique fiber capabilities of size, shape, comfort, and performance; and Vestera™ wood pulp-based alternative for the nonwoven industry used in personal hygiene applications.

In 2019 the Company acquired Industrias del Acetato de Celulosa. S.A. ("INACSA"), a cellulosic yarn business in LA Batllòria, Spain as a targeted addition to the Fibers segment's acetate yarn business.

EASTMAN CHEMICAL COMPANY GENERAL INFORMATION

Seasonality and Cyclicality

Eastman's earnings are typically higher in second and third quarters, and cash flows from operations are typically highest in the second half of the year due to seasonal demand based on general economic activity in the Company's key markets as described in "Business Segments". Results in all segments except Fibers are typically weaker in fourth quarter due to seasonal downturns in key markets.

The coatings and inks additives product line of the AFP segment and the intermediates product line of the CI segment are impacted by the cyclicality of key end products and markets, while other operating segments and product lines are more sensitive to global economic conditions. Eastman is exposed to consumer discretionary end-markets, particularly in the AM and AFP segments, and changes in global consumer spending impact the results in these segments. Supply and demand dynamics determine profitability at different stages of business cycles and global economic conditions affect the length of each cycle.

Sales, Marketing, and Distribution

Eastman markets and sells products primarily through a global marketing and sales organization which has a presence in the United States and approximately 30 other countries selling into more than 100 countries around the world. The Company focuses its market engagement on attractive niche markets, leveraging disruptive macro trends, and market activation throughout the value chain with both customers and downstream users. Eastman's strategy is to target industries and markets where the Company can leverage its application development expertise to develop product offerings to provide differentiated value that address current and future customer and market needs. The Company's strategic marketing approach and capabilities leverage the Company's insights about trends, markets, and customers to drive development of specialty products. Through a highly skilled and specialized sales force that is capable of providing differentiated product solutions, Eastman strives to be the preferred supplier in the Company's targeted markets.

The Company's products are also marketed through indirect channels, which include dealers and contract representatives. Sales outside the United States tend to be made more frequently through dealers and contract representatives than sales in the United States. The combination of direct and indirect sales channels, including sales online through its Customer Center website, allows Eastman to reliably serve customers throughout the world.

The Company's products are shipped to customers and to downstream users directly from Eastman manufacturing plants and distribution centers worldwide.

Sources and Availability of Raw Materials and Energy

Eastman purchases approximately 75 percent of its key raw materials and energy through different contract mechanisms, generally of one to three years in initial duration with renewal or cancellation options for each party. Most of these agreements do not require the Company to purchase materials or energy if its operations are reduced or idle. The cost of raw materials and energy is generally based on market price at the time of purchase; however, from time to time Eastman uses derivative financial instruments for certain key raw materials to mitigate the impact of market price fluctuations. Key raw materials include propane, propylene, paraxylene, methanol, cellulose, fatty alcohol, polyvinyl alcohol, and a wide variety of precursors for specialty organic chemicals. Key purchased energy sources include natural gas, coal, and electricity. The Company has multiple suppliers for most key raw materials and energy and uses quality management principles, such as the establishment of long-term relationships with suppliers and ongoing performance assessments and benchmarking, as part of its supplier selection process. When appropriate, the Company purchases raw materials from a single source supplier to maximize quality and reduce cost, and has contingency plans to minimize the potential impact of any supply disruptions from single source suppliers.

While temporary shortages of raw materials and energy may occasionally occur, these items are generally sufficiently available to cover current and projected requirements. However, their continuous availability and cost are subject to unscheduled plant interruptions occurring during periods of high demand, domestic and world market conditions, changes in government regulation, natural disasters, war or other outbreak of hostilities or terrorism or other political factors, or breakdown or degradation of transportation infrastructure. Eastman's operations or products have in the past, and may in the future, be adversely affected by these factors. See "Management's Discussion and Analysis of Financial Condition and Results of Operations - Risk Factors" in Part II, Item 7 of this Annual Report. The Company's raw material and energy costs as a percent of total cost of operations were approximately 40 percent in 2019. For additional information about raw materials, see Exhibit 99.02 "Product and Raw Material Information" of this Annual Report.

Manufacturing Streams

Integral to Eastman's strategy for growth is leveraging its heritage expertise and innovation in cellulose and acetyl, olefins, polyester, and alkylamine chemistries in key markets, including transportation, building and construction, consumables, filtration media, and agriculture. For each of these chemistries, Eastman has developed and acquired a combination of assets and technologies that are operated within four manufacturing "streams", combining scale and integration across multiple manufacturing units and sites as a competitive advantage.

- In the cellulose and acetyl stream, the Company begins with coal which is gasified with oxygen in its coal gasification facility. The resulting synthesis gas is converted into acetic acid and acetic anhydride. Cellulose derivative manufacturing at the Company begins with natural polymers, sourced from managed forests, which, when combined with acetyl and olefin chemicals, provide differentiated product lines. Through a new recycling innovation, carbon renewal technology is now enabling the recycling of complex plastics to the basic building blocks of Eastman's cellulosic product stream. The major end-markets for products from the cellulose and acetyl stream include coatings, displays, thermoplastics, and filtration media.

- In the olefins stream, the Company begins primarily with propane and ethane, which are "cracked" (the process whereby hydrocarbon molecules are broken down and rearranged) into ethylene and propylene in three cracking units at its site in Longview, Texas. As a result of modifications completed in 2018, these units also offer flexibility to use RGP as a diversified feedstock to minimize the impact of olefins spread volatility. The Company purchases some additional propylene to supplement cracking unit production. Propylene derivative products are used in a variety of items such as paints and coatings, automotive safety glass, and non-phthalate plasticizers. Ethylene derivative products are converted for end-uses in the food industry, health and beauty products, detergents, and automotive products.

- In the polyester stream, the Company begins with paraxylene and glycol feedstocks, converting them through a series of intermediate materials to ultimately produce copolyesters. Eastman can add specialty monomers to copolyesters to provide clear, tough, chemically resistant product characteristics. As a result, the Company's copolyesters effectively compete with materials such as polycarbonate and acrylic. The polyester stream is now leveraging advanced circular recycling technology to enable various waste plastics to be recycled into high quality, specialty copolyester products.

- In the alkylamines stream, the Company begins with ammonia and alcohol feedstocks to produce methylamines and higher alkylamines, which can then be further converted into alkylamine derivatives. The Company's alkylamines products are primarily used in agriculture, water treatment, consumables, animal nutrition, and oil and gas end-markets.

The Company leverages its expertise and innovation in cellulose and acetyl, olefins, polyester, and alkylamine chemistries and technologies, to meet demand and create new uses and opportunities for the Company's products in key markets. Through integration and optimization across these streams, the Company is able to create unique and differentiated products that have a performance advantage over competitive materials.

Human Capital

Eastman employs approximately 14,500 people worldwide. Approximately 10 percent of the total worldwide labor force is represented by collective labor agreements, mostly outside the United States.

Effective attraction, development, and retention of, and compensation and benefits to, human resource talent (or "human capital"), including workforce and management development, diversity and inclusion initiatives, succession planning, and corporate culture and leadership quality, morale, and development are vital to the success of Eastman's innovation-driven growth strategy. The Compensation and Management Development Committee of the Board of Directors oversees workforce and senior management development and the Board of Directors monitors the culture of the Company and leadership quality, morale and development.

Customers

Eastman has an extensive customer base and, while it is not dependent on any one customer, loss of certain top customers could adversely affect the Company until such business is replaced. The top 100 customers accounted for approximately 55 percent of the Company's 2019 sales revenue. No single customer accounted for 10 percent or more of the Company's consolidated sales revenue during 2019.

Intellectual Property and Trademarks

While Eastman's intellectual property portfolio is an important Company asset which it expands and vigorously protects globally through a combination of patents, trademarks, copyrights, and trade secrets, neither its business as a whole nor any particular operating segment is materially dependent upon any one particular patent, trademark, copyright, or trade secret. As a producer of a broad range of advanced materials, specialty additives, chemicals, and fibers, Eastman owns over 700 active United States patents and more than 1,500 active foreign patents, expiring at various times over several years, and owns over 5,300 active worldwide trademark applications and registrations. Eastman continues to actively protect its intellectual property. As the laws of many countries do not protect intellectual property to the same extent as the laws of the United States, Eastman cannot ensure that it will be able to adequately protect its intellectual property assets outside the United States. See "Management's Discussion and Analysis of Financial Condition and Results of Operations - Risk Factors" in Part II, Item 7 of this Annual Report.

The Company pursues opportunities to license proprietary technology to third parties where it has determined competitive impact to its businesses will be minimal. These arrangements typically are structured to require payments at significant project milestones such as signing, completion of design, and start-up.

Research and Development

Management applies its innovation-driven growth model to leverage the Company's world class scalable technology platforms that provide a competitive advantage and the foundation for sustainable earnings growth. The Company's R&D strategy for sustainable growth through innovation includes multi-generational product development for specialty products, faster and more differentiated product development by leveraging global application development capabilities, and the creation of value through integration of multiple technology platforms. The Company leverages core competencies in polyesters, cellulose esters, thermoplastic processing, textile capability, and in-house application expertise for use in a wide range of applications to provide solutions to markets which are in search of new and improved products. This strategy has been accelerated by enhancements of global differentiated application development capabilities that position Eastman as a strategic element of customers' success within attractive niche markets. See examples of recent product and technology innovations in "Corporate Overview - Business Strategy - Innovation".

Eastman manages certain growth initiatives and costs at the corporate level, including certain R&D costs not allocated to any one operating segment. The Company uses a stage-gating process, which is a disciplined decision-making framework for evaluating targeted opportunities, with a number of projects at various stages of development. As projects meet milestones, additional amounts are spent on those projects. The Company continues to explore and invest in R&D initiatives such as high-performance materials and opportunities created by disruptive macro trends including sustainability and development of a more "circular economy". See "Corporate Overview - Business Strategy - Sustainability".

Environmental

The Company is subject to significant and complex laws, regulations, and legal requirements relating to the use, storage, handling, generation, transportation, emission, discharge, disposal, remediation of, and exposure to, hazardous and non-hazardous substances and wastes in all of the countries in which it does business. These health, safety, and environmental considerations are a priority in the Company's planning for all existing and new products and processes. The Health, Safety, Environmental and Security Committee of Eastman's Board of Directors oversees the Company's policies and practices concerning health, safety, and the environment and its processes for complying with related laws and regulations and monitors related matters.

The Company's policy is to operate its plants and facilities in compliance with all applicable laws and regulations such that it protects the environment and the health and safety of its employees and the public. The Company intends to continue to make expenditures for environmental protection and improvements in a timely manner consistent with its policies and with available technology. In some cases, applicable environmental regulations such as those adopted under the Clean Air Act, Resource Conservation and Recovery Act, Comprehensive Environmental Response, Compensation, and Liability Act, and related actions of regulatory agencies determine the timing and amount of environmental costs incurred by the Company. Likewise, any new legislation or regulations related to greenhouse gas emissions and energy, or the repeal of such legislation or regulations, could impact the timing and amount of environmental costs incurred by the Company.

The Company accrues environmental costs when it is probable that the Company has incurred a liability at a contaminated site and the amount can be reasonably estimated. In some instances, the amount cannot be reasonably estimated due to insufficient information, particularly as to the nature and timing of future expenditures. In these cases, the liability is monitored until such time that sufficient information exists. With respect to a contaminated site, the amount accrued reflects liabilities expected to be paid out within approximately 30 years and the Company's assumptions about remediation requirements at the contaminated site, the nature of the remedy, the outcome of discussions with regulatory agencies and other potentially responsible parties at multi-party sites, and the number and financial viability of other potentially responsible parties. Changes in the estimates on which the accruals are based, unanticipated government enforcement action, or changes in health, safety, environmental, and chemical control regulations, and testing requirements could result in higher or lower costs.

Eastman's cash expenditures related to environmental protection and improvement were $244 million, $274 million, and $257 million in 2019, 2018, and 2017, respectively, and include operating costs associated with environmental protection equipment and facilities, engineering costs, and construction costs. These cash expenditures include environmental capital expenditures of approximately $27 million, $44 million, and $38 million in 2019, 2018, and 2017, respectively.

The Company does not currently expect near term environmental capital expenditures arising from requirements of environmental laws and regulations to materially impact the Company's planned level of annual capital expenditures for environmental control facilities. Other matters concerning health, safety, and the environment are discussed in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7 and in Note 1, "Significant Accounting Policies"; Note 12, "Environmental Matters and Asset Retirement Obligations"; and Note 21, "Reserve Rollforwards" to the Company's consolidated financial statements in Part II, Item 8 of this Annual Report.

Backlog

As of December 31, 2019, Eastman's backlog of firm sales orders represented less than 10 percent of the Company's total consolidated revenue for the year. These orders are primarily short-term, and all orders are expected to be filled in the following year. The Company manages its inventory levels to control the backlog of products depending on customers' needs. In areas where the Company is the single source of supply, or competitive forces or customers' needs dictate, the Company may carry additional inventory to meet customer requirements.

Available Information - Securities and Exchange Commission ("SEC") Filings

Eastman makes available free of charge, in the "Investors - SEC Information" section of its Internet website (www.eastman.com), its annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 as soon as reasonably practicable after electronically filing such material with, or furnishing it to, the SEC. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at http://www.sec.gov.

ITEM 1A. RISK FACTORS

For identification and discussion of the most significant risks applicable to the Company and its business, see "Management's Discussion and Analysis of Financial Condition and Results of Operations - Risk Factors" in Part II, Item 7 of this Annual Report.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

Certain information about Eastman's executive officers is provided below:

Mark J. Costa, age 53, is Chief Executive Officer and Chair of the Eastman Chemical Company Board of Directors. Mr. Costa joined the Company in June 2006 as Senior Vice President, Corporate Strategy and Marketing; was appointed Executive Vice President, Polymers Business Group Head and Chief Marketing Officer in August 2008; was appointed Executive Vice President, Specialty Polymers, Coatings and Adhesives, and Chief Marketing Officer in May 2009; and became President and a member of the Board of Directors in May 2013. Prior to joining Eastman, Mr. Costa was a senior partner with Monitor Group, a global management consulting firm. He joined Monitor in 1988, and his experience included corporate and business unit strategies, asset portfolio strategies, innovation and marketing, and channel strategies across a wide range of industries. Mr. Costa was appointed Chief Executive Officer in January 2014 and was named Board Chair effective July 2014.

Curtis E. Espeland, age 55, is Executive Vice President and Chief Financial Officer. Mr. Espeland joined Eastman in 1996, and has served in various financial management positions of increasing responsibility, including Director of Internal Audit; Director of Finance, Asia Pacific; Director of Corporate Planning and Forecasting; Vice President and Controller; Vice President, Finance, Eastman Division; Vice President, Finance, Polymers; and Senior Vice President and Chief Financial Officer from 2008 until December 2013. He served as the Company's Chief Accounting Officer from December 2002 to 2008 and was appointed to his current position effective January 2014. Prior to joining Eastman, Mr. Espeland was an audit and business advisory manager with Arthur Andersen LLP in the United States, Eastern Europe, and Australia. (As previously reported, on February 28, 2020 Mr. Espeland will be succeeded as Chief Financial Officer by current Vice President, Finance, William T. McLain, Jr., and will continue to serve as an executive officer until his retirement in mid-2020. Mr. McLain, age 47, joined Eastman in 2000 and has served in high-level finance and accounting roles throughout the organization in the United States, Asia, and Europe. Most recently Mr. McLain served as Vice President, Finance. He has previously served as Corporate Controller; Treasurer; and Director, Finance for Asia Pacific. Prior to Eastman, Mr. McLain worked for the public accounting firm PricewaterhouseCoopers LLP.)

Brad A. Lich, age 52, is Executive Vice President and Chief Commercial Officer, with responsibility for the AM and Fibers segments, outside-U.S. regional business leadership, and the marketing, sales, pricing, and procurement organizations. Mr. Lich joined Eastman in 2001 as Director of Global Product Management and Marketing for the Coatings business. Other positions of increasing responsibility followed, including General Manager of Emerging Markets of the former Coatings, Adhesives, Specialty Polymers, and Inks ("CASPI") segment. In 2006, Mr. Lich became Vice President of Global Marketing with direct responsibility for company-wide global marketing functions. In 2008, Mr. Lich was appointed Vice President and General Manager of the CASPI segment, and in 2012 was appointed Vice President and General Manager of the AFP segment. In January 2014, Mr. Lich was appointed Executive Vice President, with responsibility for the AFP and AM segments and the marketing, sales, and pricing organizations. In March 2016, Mr. Lich assumed executive responsibility for outside-U.S. regional business leadership. Mr. Lich was appointed to his current position effective July 2016.

Lucian Boldea, age 48, is Executive Vice President with responsibility for the AFP and CI segments. Dr. Boldea joined Eastman in 1997 as a chemist. During his career at Eastman, he has held various positions in R&D, licensing, business management, and corporate growth platforms leadership in the AM segment. Between 2012 and 2015 he served as Vice President and General Manager, Specialty Plastics, in the AM segment. In 2015, he was appointed Group Vice President and General Manager of the AFP segment and became Senior Vice President of the AFP segment in July 2016. Dr. Boldea was appointed to his current position effective January 2019.

Mark K. Cox, age 54, is Senior Vice President and Chief Manufacturing, Supply Chain, and Engineering Officer. Mr. Cox joined Eastman in 1986 and has served in a variety of management positions, including business management, manufacturing, and technology leadership roles. In August 2008, Mr. Cox was appointed Vice President, Chemicals and Fibers Technology. Beginning in May 2009, Mr. Cox served as Vice President, Chemicals, Fibers, and Performance Polymers Technology. He was appointed Vice President, Worldwide Engineering and Construction in August 2010, appointed Senior Vice President and Chief Manufacturing and Engineering Officer effective January 2014, and to his current position effective March 2016.

Stephen G. Crawford, age 55, is Senior Vice President and Chief Technology and Sustainability Officer, with executive responsibility for corporate innovation and sustainability. Mr. Crawford joined Eastman in 1984 and held leadership positions of increasing responsibility in both the manufacturing and technology organizations. From 2007 until January 2014 he served as Vice President of Global R&D in the AM and AFP segments. He was appointed Senior Vice President and Chief Technology Officer effective January 2014, and to his current position effective October 2019.

Clark L. Jordan, age 55, is Vice President, Interim Chief Legal Officer and Corporate Secretary. Mr. Jordan has overall responsibility for Eastman's Legal, Corporate Health, Safety, Environmental, Security, Product Safety, Regulatory Affairs, and Global Trade Compliance organizations. Mr. Jordan joined Eastman in 1995 and was an in-house attorney until 1997. In 2011, after holding various positions in private legal practice, Mr. Jordan returned to Eastman as Director Global Business Conduct and Senior Business Counsel. Mr. Jordan was appointed Vice President, Global Trade Compliance and Assistant General Counsel effective February 2015, and to his current position in August 2019.

Perry Stuckey III, age 60, is Senior Vice President, Chief Human Resources Officer. Mr. Stuckey joined Eastman in 2011 as Vice President, Global Human Resources, and was responsible for Eastman's human resources strategy and services worldwide. Mr. Stuckey's work experience includes a variety of global human resource management positions in manufacturing, industrial automation, and bio-technology companies, including Hill-Rom Company, Rockwell Automation, and Monsanto Company. Mr. Stuckey was appointed to his current position in January 2013.

Scott V. King, age 51, is Vice President, Corporate Controller and Chief Accounting Officer. Since joining Eastman in 1999 as Manager, Corporate Consolidations and External Reporting, Mr. King has held various positions of increasing responsibility in the financial organization. He was first appointed Corporate Controller in August 2007 and has served as Chief Accounting Officer since September 2008. Prior to joining Eastman, Mr. King was an audit and business advisory manager with PricewaterhouseCoopers LLP.

ITEM 2. PROPERTIES

At December 31, 2019, Eastman owned or operated 50 manufacturing facilities and had equity interests in three manufacturing joint ventures in a total of 15 countries. Utilization of these sites may vary with product mix and economic, seasonal, and other business conditions; however, none of the principal plants is substantially idle. The Company's plants, including approved expansions, generally have sufficient capacity for existing needs and expected near-term growth. These plants are generally well maintained, in good operating condition, and suitable and adequate for their use. Unless otherwise indicated, all properties are owned. Corporate headquarters are in Kingsport, Tennessee. The Company's regional headquarters are in Shanghai, China; Rotterdam, the Netherlands; Singapore; and Zug, Switzerland.

The locations and general character of the Company's manufacturing facilities are:

	Segment using manufacturing location			
Location	Additives & Functional Products	Advanced Materials	Chemical Intermediates	Fibers
USA				
Alvin, Texas [1]	x			
Anniston, Alabama	x			
Axton, Virginia		x		
Canoga Park, California [2]		x		
Cartersville, Georgia [1]	x			
Chestertown, Maryland			x	
Columbia, South Carolina [1]		x		
Franklin, Virginia [1]	x			
Jefferson, Pennsylvania	x			
Kingsport, Tennessee	x	x	x	x
Lemoyne, Alabama [1]	x			
Linden, New Jersey	x			
Longview, Texas	x	x	x	
Martinsville, Virginia [3]		x		
Monongahela, Pennsylvania	x			
Pace, Florida [2]	x		x	
Sauget, Illinois	x			
Springfield, Massachusetts		x		
St. Gabriel, Louisiana	x		x	
Sun Prairie, Wisconsin		x		
Texas City, Texas			x	
Trenton, Michigan		x		
Watertown, New York				x
Europe				
Antwerp, Belgium [1]	x	x		
Ghent, Belgium [3]	x	x	x	
Kohtla-Järve, Estonia	x		x	
Oulu, Finland [2]	x			
Dresden, Germany		x		
Leuna, Germany	x		x	
Marl, Germany [2]	x			
Nienburg, Germany	x			
Middelburg, the Netherlands	x			
LA Batllòria, Spain				x
Newport, Wales	x	x		

(1) Eastman is a guest under an operating agreement with a third party that operates its manufacturing facilities at the site.
(2) Eastman leases from a third party and operates the site.
(3) Eastman has more than one manufacturing facility at this location.

Location	Segment using manufacturing location			
	Additives & Functional Products	Advanced Materials	Chemical Intermediates	Fibers
Asia Pacific				
Nanjing, China	x		x	
Suzhou, China (1)(2)(3)	x	x		
Wuhan, China (4)			x	
Yixing, China	x			
Zibo, China (5)	x		x	
Kashima, Japan	x			
Ulsan, Korea (6)				x
Kuantan, Malaysia (1)	x	x		
Jurong Island, Singapore (1)(7)	x		x	
Latin America				
Itupeva, Brazil (8)	x			
Mauá, Brazil			x	
Santo Toribio, Mexico		x		
Uruapan, Mexico	x			

(1) Eastman leases from a third party and operates the site.
(2) Eastman has more than one manufacturing facility at this location.
(3) Eastman holds a 60 percent share of Solutia Therminol Co., Ltd. Suzhou in the AFP segment.
(4) Eastman holds a 51 percent share of Eastman Specialties Wuhan Youji Chemical Co., Ltd.
(5) Eastman holds a 51 percent share of Qilu Eastman Specialty Chemical, Ltd.
(6) Eastman holds an 80 percent share of Eastman Fibers Korea Limited.
(7) In fourth quarter 2019, management approved a plan to discontinue production of certain products at this location by the end of 2020.
(8) Eastman is a guest under an operating agreement with a third party that operates its manufacturing facilities at the site.

Eastman has 50 percent or less ownership in joint ventures that have manufacturing facilities at the following locations:

Location	Segment using manufacturing location			
	Additives & Functional Products	Advanced Materials	Chemical Intermediates	Fibers
Asia Pacific				
Hefei, China				x
Nanjing, China	x			
Shenzhen, China		x		

Eastman has distribution facilities at all of its plant sites. In addition, the Company owns or leases approximately 240 stand-alone distribution facilities in approximately 30 countries. The Company also maintains technical service centers around the world.

A summary of properties, classified by type, is included in Note 3, "Properties and Accumulated Depreciation", to the Company's consolidated financial statements in Part II, Item 8 of this Annual Report.

ITEM 3. LEGAL PROCEEDINGS

General

From time to time, Eastman and its operations are parties to, or targets of, lawsuits, claims, investigations and proceedings, including product liability, personal injury, asbestos, patent and intellectual property, commercial, contract, environmental, antitrust, health and safety, and employment matters, which are handled and defended in the ordinary course of business. While the Company is unable to predict the outcome of these matters, it does not believe, based upon currently available facts, that the ultimate resolution of any such pending matters will have a material adverse effect on its overall financial condition, results of operations, or cash flows.

Solutia Legacy Torts Claims Litigation

Pursuant to an Amended and Restated Settlement Agreement effective February 28, 2008 between Solutia, Inc. ("Solutia") and Monsanto Company ("Monsanto") in connection with Solutia's emergence from Chapter 11 bankruptcy proceedings (the "Monsanto Settlement Agreement"), Monsanto is responsible for the defense and indemnification of Solutia against any Legacy Tort Claims (as defined in the Monsanto Settlement Agreement) and Solutia has agreed to retain responsibility for certain tort claims, if any, that may arise from Solutia's conduct after its spinoff from Pharmacia Corporation (f/k/a Monsanto), which occurred on September 1, 1997. Solutia, which became a wholly-owned subsidiary of Eastman upon Eastman's acquisition of Solutia in July 2012, has been named as a defendant in several such proceedings, and has submitted the matters to Monsanto, which was acquired by Bayer AG in June 2018, as Legacy Tort Claims. To the extent these matters are not within the meaning of Legacy Tort Claims, Solutia could potentially be liable thereunder. In connection with the completion of its acquisition of Solutia, Eastman guaranteed the obligations of Solutia and Eastman was added as an indemnified party under the Monsanto Settlement Agreement.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON STOCK, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

(a) Eastman's common stock is traded on the New York Stock Exchange (the "NYSE") under the symbol "EMN".

As of December 31, 2019, there were 135,993,046 shares of Eastman's common stock issued and outstanding, which shares were held by 13,222 stockholders of record. These shares include 50,798 shares held by the Company's charitable foundation.

See Part III, Item 12, "Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters -Securities Authorized for Issuance Under Equity Compensation Plans" for the information required by Item 201(d) of Regulation S-K.

(b) Not applicable.

(c) Not applicable.

ITEM 6. SELECTED FINANCIAL DATA

Statements of Earnings Data	**Year Ended December 31,**				
(Dollars in millions, except per share amounts)	**2019**	**2018**	**2017**	**2016**	**2015**
Sales	$ 9,273	$ 10,151	$ 9,549	$ 9,008	$ 9,648
Earnings before interest and taxes	1,120	1,552	1,530	1,389	1,392
Net earnings	762	1,084	1,388	859	854
Less: Net earnings attributable to noncontrolling interest	3	4	4	5	6
Net earnings attributable to Eastman	$ 759	$ 1,080	$ 1,384	$ 854	$ 848
Basic earnings per share attributable to Eastman:	$ 5.52	$ 7.65	$ 9.56	$ 5.80	$ 5.71
Diluted earnings per share attributable to Eastman:	$ 5.48	$ 7.56	$ 9.47	$ 5.75	$ 5.66
Statements of Financial Position Data					
Current assets	$ 3,321	$ 3,365	$ 3,143	$ 2,866	$ 2,878
Net properties	5,571	5,600	5,607	5,276	5,130
Goodwill	4,431	4,467	4,527	4,461	4,518
Intangible assets, net of accumulated amortization	2,011	2,185	2,373	2,479	2,650
Total assets	16,008	15,995	15,999	15,457	15,580
Current liabilities	1,789	1,851	1,982	1,795	2,056
Long-term borrowings	5,611	5,925	6,147	6,311	6,577
Total liabilities	9,976	10,117	10,519	10,849	11,559
Total Eastman stockholders' equity	5,958	5,803	5,403	4,532	3,941
Dividends declared per share	2.52	2.30	2.09	1.89	1.66
Statements of Cash Flow Data					
Cash provided by operating activities	$ 1,504	$ 1,543	$ 1,657	$ 1,385	$ 1,624

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") is based upon the consolidated financial statements of Eastman Chemical Company ("Eastman" or the "Company"), which have been prepared in accordance with accounting principles generally accepted ("GAAP") in the United States, and should be read in conjunction with the Company's consolidated financial statements and related notes included elsewhere in this Annual Report on Form 10-K (this "Annual Report"). All references to earnings per share ("EPS") contained in this report are to diluted EPS unless otherwise noted. EBIT is the GAAP measure earnings before interest and taxes.

CRITICAL ACCOUNTING ESTIMATES

In preparing the consolidated financial statements in conformity with GAAP, management must make decisions which impact the reported amounts and the related disclosures. Such decisions include the selection of the appropriate accounting principles to be applied and assumptions on which to base estimates and judgments that affect the reported amounts of assets, liabilities, sales revenue and expenses, and related disclosure of contingencies. On an ongoing basis, Eastman evaluates its estimates, including those related to impairment of long-lived assets, environmental costs, pension and other postretirement benefits, litigation and contingent liabilities, and income taxes. The Company bases its estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. Management believes the critical accounting estimates described below are the most important to the fair presentation of the Company's financial condition and results. These estimates require management's most significant judgments in the preparation of the Company's consolidated financial statements.

Impairment of Long-Lived Assets

Definite-lived Assets

Properties and equipment and definite-lived intangible assets to be held and used by Eastman are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review of properties and equipment and definite-lived intangible assets is performed at the asset group level, which is the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. If the carrying amount is not considered to be recoverable, an analysis of fair value is triggered. An impairment is recognized for the excess of the carrying amount of the asset over the fair value. Fair value is the price that would be received to sell an asset in an orderly transaction between market participants. The Company's assumptions related to long-lived assets are subject to change and impairments may be required in the future. If estimates of fair value less costs to sell are revised, the carrying amount of the related asset is adjusted, resulting in a charge to earnings.

Goodwill

Eastman conducts testing of goodwill annually in the fourth quarter or more frequently when events and circumstances indicate an impairment may have occurred. The testing of goodwill is performed at the "reporting unit" level which the Company has determined to be its "components". Components are defined as an operating segment or one level below an operating segment, and in order to be a reporting unit, the component must 1) be a "business" as defined by applicable accounting standards (an integrated set of activities and assets that is capable of being conducted and managed for the purpose of providing a return in the form of dividends, lower costs, or other economic benefits directly to the investors or other owners, members, or participants); 2) have discrete financial information available; and 3) be reviewed regularly by Company operating segment management. The Company aggregates certain components into reporting units based on economic similarities.

A reporting unit's goodwill is considered to be impaired when the reporting unit's estimated fair value is less than its carrying value. The Company uses an income approach and applies a discounted cash flow model in testing the carrying value of goodwill for each reporting unit. Key assumptions and estimates used in the Company's 2019 goodwill impairment testing included projections of revenues and EBIT determined using the Company's annual multi-year strategic plan, the estimated weighted average cost of capital ("WACC"), and a projected long-term growth rate. The Company believes these assumptions are consistent with those a hypothetical market participant would use given circumstances that were present at the time the estimates were made. However, actual results and amounts may be significantly different from the Company's estimates. In addition, the use of different estimates or assumptions could result in materially different estimated fair values of reporting units. The WACC is calculated incorporating weighted average returns on debt and equity from market participants. Therefore, changes in the market, which are beyond the control of the Company, may have an impact on future calculations of estimated fair value. For additional information, see Note 1, "Significant Accounting Policies", to the Company's consolidated financial statements in Part II, Item 8 of this Annual Report.

As a result of the goodwill impairment testing performed during fourth quarter 2019, fair values were determined to exceed the carrying values for each reporting unit tested with the exception of crop protection (part of the Additives & Functional Products operating segment as described in Part I, Item 1, "Business", of this Annual Report). The Company reduced the carrying value of the crop protection reporting unit to its estimated fair value through recognition of a $45 million goodwill impairment. The impairment was primarily due to the impact of recent regulatory changes in the European Union on the current period and forecasted revenue and EBIT and a decrease in the long-term growth rate assumed in the goodwill impairment model. Two of the most critical assumptions used in the calculation of the fair value of the crop protection reporting unit are the target market long-term growth rate and the WACC. The Company performed a sensitivity analysis of both of those assumptions, assuming a one percent decrease in the expected long-term growth rate or a one percent increase in the WACC, and both scenarios independently yielded an estimated fair value for the crop protection reporting unit below carrying value. The crop protection reporting unit's goodwill after the reduction for impairment was $190 million as of December 31, 2019.

Indefinite-lived Intangible Assets

Eastman conducts testing of indefinite-lived intangible assets annually in the fourth quarter or more frequently when events and circumstances indicate an impairment may have occurred. The carrying value of an indefinite-lived intangible asset is considered to be impaired when the fair value, as established by appraisal or based on discounted future cash flows of certain related products, is less than the respective carrying value.

Indefinite-lived intangible assets, consisting primarily of various tradenames, are tested for potential impairment by comparing the estimated fair value to the carrying amount. The Company uses an income approach, specifically the relief from royalty method, to test indefinite-lived intangible assets. The estimated fair value of tradenames is determined based on an assumed royalty rate savings, discounted by the calculated market participant WACC plus a risk premium.

The Company had $537 million in indefinite-lived intangible assets at the time of impairment testing. There was no impairment of the Company's indefinite-lived intangible assets as a result of the tests performed during fourth quarter 2019.

The Company will continue to monitor both goodwill and indefinite-lived intangible assets for any indication of events which might require additional testing before the next annual impairment test.

For additional information, see Note 3, "Properties and Accumulated Depreciation", Note 4, "Goodwill and Other Intangible Assets", and Note 15, "Asset Impairments and Restructuring Charges, Net", to the Company's consolidated financial statements in Part II, Item 8 of this Annual Report.

Environmental Costs

Eastman recognizes environmental remediation costs when it is probable that the Company has incurred a liability at a contaminated site and the amount can be reasonably estimated. When a single amount cannot be reasonably estimated but the cost can be estimated within a range, the Company recognizes the minimum undiscounted amount. This undiscounted amount reflects liabilities expected to be paid within approximately 30 years and the Company's assumptions about remediation requirements at the contaminated site, the nature of the remedy, the outcome of discussions with regulatory agencies and other potentially responsible parties at multi-party sites, and the number and financial viability of other potentially responsible parties. Changes in the estimates on which the accruals are based, unanticipated government enforcement action, or changes in health, safety, environmental, and chemical control regulations and testing requirements could result in higher or lower costs. Estimated future environmental expenditures for undiscounted remediation costs ranged from the best estimate or minimum of $260 million to the maximum of $487 million and from the best estimate or minimum of $271 million to the maximum of $508 million at December 31, 2019 and December 31, 2018, respectively. The best estimate or minimum estimated future environmental expenditures are considered to be probable and reasonably estimable and include the amounts recognized at both December 31, 2019 and December 31, 2018.

The Company also establishes reserves for closure and post-closure costs associated with the environmental and other assets it maintains. Environmental assets include but are not limited to waste management units, such as landfills, water treatment facilities, and surface impoundments. When these types of assets are constructed or installed, a loss contingency reserve is established for the anticipated future costs associated with the retirement or closure of the asset based on its expected life and the applicable regulatory closure requirements. The Company recognizes the asset retirement obligations in the period in which they are incurred if a reasonable estimate of fair value can be made. The asset retirement obligations are discounted to expected present value and subsequently adjusted for changes in fair value. These future estimated costs are charged to earnings over the estimated useful life of the assets. If the Company changes its estimate of the environmental asset retirement obligation costs or its estimate of the useful lives of these assets, expenses charged to earnings will be impacted. For sites that have environmental asset retirement obligations, the best estimate for these asset retirement obligation costs recognized to date was $27 million and $25 million at December 31, 2019 and December 31, 2018, respectively.

The Company's total amount reserved for environmental loss contingencies, including the remediation and closure and post-closure costs described above, was $287 million and $296 million at December 31, 2019 and December 31, 2018, respectively. This loss contingency reserve represents the best estimate or minimum for undiscounted remediation costs and the best estimate of the amount accrued to date for discounted asset retirement obligation costs. For additional information, see Note 12, "Environmental Matters and Asset Retirement Obligations", to the Company's consolidated financial statements in Part II, Item 8 of this Annual Report.

Pension and Other Postretirement Benefits

Eastman maintains defined benefit pension plans that provide eligible employees with retirement benefits. Under its other postretirement benefit plans in the U.S., Eastman provides life insurance for eligible retirees hired prior to January 1, 2007. Eastman provides a subsidy for pre-Medicare health care and dental benefits to eligible retirees hired prior to January 1, 2007 that will end on December 31, 2021. Company funding is also provided for eligible Medicare retirees hired prior to January 1, 2007 with a health reimbursement arrangement. The estimated amounts of the costs and obligations related to these benefits primarily reflect the Company's assumptions related to discount rates and expected return on plan assets. For valuing the obligations and assets of the Company's U.S. and non-U.S. defined benefit pension plans, the Company assumed weighted average discount rates of 3.25 percent and 1.56 percent, respectively, and weighted average expected returns on plan assets of 7.37 percent and 4.26 percent, respectively, at December 31, 2019. The Company assumed a weighted average discount rate of 3.21 percent for its other postretirement benefit plans. The estimated cost of providing plan benefits also depends on demographic assumptions including retirements, mortality, turnover, and plan participation.

The Company performed a five-year experience study of the assumptions for the U.S. plans in 2017 which included a review of the mortality tables. As a result of the experience study, the Company has updated the mortality assumptions used to a modified RP-2017 table with modified MP-2017 improvement scale and no collar adjustment.

The projected benefit obligation as of December 31, 2019 and 2020 expense are affected by year-end 2019 assumptions. The following table illustrates the sensitivity to changes in the Company's long-term assumptions in the assumed discount rate and expected return on plan assets for all pension and other postretirement benefit plans. The sensitivities below are specific to the time periods noted. They also may not be additive, so the impact of changing multiple factors simultaneously cannot be calculated by combining the individual sensitivities shown.

Change in Assumption	Impact on 2020 Pre-tax Benefits Expense (Excludes mark-to-market impact) for Pension Plans	Impact on December 31, 2019 Projected Benefit Obligation for Pension Plans		Impact on 2020 Pre-tax Benefits Expense (Excludes mark-to-market impact) for Other Postretirement Benefit Plans	Impact on December 31, 2019 Benefit Obligation for Other Postretirement Benefit Plans
		U.S.	Non-U.S.		
25 basis point decrease in discount rate	-$3 Million	+$53 Million	+$49 Million	-$1 Million	+$17 Million
25 basis point increase in discount rate	+$3 Million	-$51 Million	-$44 Million	+$1 Million	-$16 Million
25 basis point decrease in expected return on plan assets	+$7 Million	No Impact	No Impact	<+$0.5 Million	No Impact
25 basis point increase in expected return on plan assets	-$7 Million	No Impact	No Impact	<-$0.5 Million	No Impact

The assumed discount rate and expected return on plan assets used to calculate the Company's pension and other postretirement benefit obligations are established each December 31. The assumed discount rate is based upon a portfolio of high-grade corporate bonds, which are used to develop a yield curve. This yield curve is applied to the expected cash flows of the pension and other postretirement benefit obligations. Because future health care benefits under the U.S. benefit plan have been fixed at a certain contribution amount, changes in the health care cost trend assumptions do not have a material impact on results of operations. The expected return on plan assets is based upon prior performance and the long-term expected returns in the markets in which the plans invest their funds, primarily in U.S. and non-U.S. fixed income securities, U.S. and non-U.S. public equity securities, private equity, and real estate. Moreover, the expected return on plan assets is a long-term assumption and on average is expected to approximate the actual return on plan assets. Actual returns will be subject to year-to-year variances and could vary materially from assumptions.

The Company calculates service and interest cost components of net periodic benefit costs for its significant defined benefit pension and other postretirement benefit plans by applying the specific spot rates along the yield curve to the plans' projected cash flows. This cost approach does not affect the measurement of the total benefit obligation or the annual net periodic benefit cost or credit of the plans because the change in the service and interest costs will be offset in the mark-to-market ("MTM") actuarial gain or loss. The MTM gain or loss, as described in the next paragraph, is typically recognized in the fourth quarter of each year or in any other quarters in which an interim remeasurement is triggered. For additional information, see Note 10, "Retirement Plans", to the Company's consolidated financial statements in Part II, Item 8 of this Annual Report.

The Company uses fair value accounting for plan assets. If actual experience differs from actuarial assumptions, primarily discount rates and long-term assumptions for asset returns which were used in determining the current year expense, the difference is recognized as part of the MTM net gain or loss in fourth quarter each year, and any other quarter in which an interim remeasurement is triggered. The MTM net gain or loss applied to net earnings in 2019, 2018, and 2017 due to the actual experience versus actuarial assumptions for the defined benefit pension and other postretirement benefit plans were a net loss of $143 million, a net loss of $99 million, and a net gain of $21 million, respectively. The 2019 MTM net loss includes an actuarial loss of approximately $385 million, resulting primarily from the Company's December 31, 2019 weighted-average assumed discount rate of 2.80 percent, which is lower than for the prior year, and changes in other actuarial assumptions. Overall asset values increased approximately $240 million due to asset values appreciating in excess of the assumed weighted-average rate of return. The actual gain was approximately $405 million, or approximately 15 percent, which was above the expected return of approximately $165 million, or approximately 6 percent.

While changes in obligations do not correspond directly to cash funding requirements, it is an indication of the amount the Company will be required to contribute to the plans in future years. The amount and timing of such cash contributions is dependent upon interest rates, actual returns on plan assets, retirements, attrition rates of employees, and other factors. For further information regarding pension and other postretirement benefit obligations, see Note 10, "Retirement Plans", to the Company's consolidated financial statements in Part II, Item 8 of this Annual Report.

Litigation and Contingent Liabilities

From time to time, Eastman and its operations are parties to, or targets of, lawsuits, claims, investigations and proceedings, including product liability, personal injury, asbestos, patent and intellectual property, commercial, contract, environmental, antitrust, health and safety, and employment matters, which are handled and defended in the ordinary course of business. The Company accrues a contingent loss liability for such matters when it is probable that a liability has been incurred and the amount can be reasonably estimated. When a single amount cannot be reasonably estimated but the cost can be estimated within a range, the Company recognizes the minimum amount. The Company expenses legal costs, including those expected to be incurred in connection with a loss contingency, as incurred. Based upon currently available facts, the Company believes the amounts reserved are adequate for such pending matters; however, results of operations could be adversely affected by monetary damages, costs or expenses, and charges against its overall financial condition, results of operations, or cash flows in particular periods.

Income Taxes

Amounts of deferred tax assets and liabilities on Eastman's Consolidated Statements of Financial Position are based on temporary differences between the financial reporting and tax bases of assets and liabilities, applying enacted tax rates expected to be in effect for the year in which the differences are expected to reverse. The ability to realize deferred tax assets is evaluated through the forecasting of taxable income and domestic and foreign taxes, using historical and projected future operating results, the reversal of existing temporary differences, and the availability of tax planning opportunities. Valuation allowances are recognized to reduce deferred tax assets when it is more likely than not that a tax benefit will not be realized. In the event that the actual outcome of future tax consequences differs from management estimates and assumptions, the resulting change to the provision for (benefit from) income taxes could have a material impact on the consolidated results of operations and statements of financial position. As of December 31, 2019 and 2018, valuation allowances of $453 million and $487 million, respectively, have been provided against the deferred tax assets.

The calculation of income tax liabilities involves uncertainties in the application of complex tax laws and regulations, which are subject to legal interpretation and management judgment. Eastman's income tax returns are regularly examined by federal, state and foreign tax authorities, and those audits may result in proposed adjustments. The Company has evaluated these potential issues under the more-likely-than-not standard of the accounting literature. A tax position is recognized if it meets this standard and is measured at the largest amount of benefit that has a greater than 50 percent likelihood of being realized. Such judgments and estimates may change based on audit settlements, court cases and interpretation of tax laws and regulations. Income tax expense could be materially impacted to the extent the Company prevails in a tax position or when the statute of limitations expires for a tax position for which a liability for unrecognized tax benefits or valuation allowances have been established, or to the extent payments are required in excess of the established liability for unrecognized tax benefits.

The Company accrues interest related to unrecognized income tax positions, which is included as a component of the income tax provision on the balance sheet. For further information, see Note 7, "Income Taxes", to the Company's consolidated financial statements in Part II, Item 8 of this Annual Report.

NON-GAAP FINANCIAL MEASURES

Non-GAAP financial measures, and the accompanying reconciliations of the non-GAAP financial measures to the most comparable GAAP measures, are presented below in this section and in "Overview", "Results of Operations", "Summary by Operating Segment", "Liquidity and Other Financial Information", and "Outlook" in this MD&A.

Management discloses non-GAAP financial measures because it believes investors use these metrics in evaluating longer term period-over-period performance, and to allow investors to better understand and evaluate the information used by management to assess the Company's and its operating segments' performances, make resource allocation decisions, and evaluate organizational and individual performances in determining certain performance-based compensation. Non-GAAP financial measures do not have definitions under GAAP, and may be defined differently by, and not be comparable to, similarly titled measures used by other companies. As a result, management cautions investors not to place undue reliance on any non-GAAP financial measure, but to consider such measures alongside the most directly comparable GAAP financial measure.

Company Use of Non-GAAP Financial Measures

Non-Core Items and any Unusual or Non-Recurring Items Excluded from Non-GAAP Earnings

In addition to evaluating Eastman's financial condition, results of operations, liquidity, and cash flows as reported in accordance with GAAP, management also evaluates Company and operating segment performance, and makes resource allocation and performance evaluation decisions, excluding the effect of transactions, costs, and losses or gains that do not directly result from Eastman's normal, or "core", business and operations, or are otherwise of an unusual or non-recurring nature.

- Non-core transactions, costs, and losses or gains relate to, among other things, cost reductions, growth and profitability improvement initiatives, and other events outside of core business operations, and have included asset impairments and restructuring charges and gains, costs of and related to acquisitions, gains and losses from and costs related to dispositions, closure, or shutdowns of businesses or assets, financing transaction costs, and MTM losses or gains for pension and other postretirement benefit plans.

- In 2018 the Company recognized unusual income from insurance in excess of costs for, and in 2017 recognized unusual net costs of, the disruption, repairs, and reconstruction of the Kingsport site's coal gasification operations area resulting from the previously reported October 4, 2017 explosion (the "coal gasification incident"). Management considers the coal gasification incident unusual because of the Company's operational and safety history and the magnitude of the unplanned disruption.

- In 2018 the Company recognized unusual costs and in both 2019 and 2018 unusual net decreases to earnings from adjustments of the net tax benefit recognized in fourth quarter 2017, resulting from tax law changes, primarily the 2017 Tax Cuts and Jobs Act (the "Tax Reform Act"), and related outside-U.S. entity reorganizations as part of the transition to an international treasury services center. Management considers these actions and associated costs and income unusual because of the infrequent nature of such changes in tax law and resulting actions and the significant impacts on earnings.

Because non-core, unusual, or non-recurring transactions, costs, and losses or gains may materially affect the Company's, or any particular operating segment's, financial condition or results in a specific period in which they are recognized, management believes it is appropriate to evaluate the financial measures prepared and calculated in accordance with both GAAP and the related non-GAAP financial measures excluding the effect on the Company's results of these non-core, unusual, or non-recurring items. In addition to using such measures to evaluate results in a specific period, management evaluates such non-GAAP measures, and believes that investors may also evaluate such measures, because such measures may provide more complete and consistent comparisons of the Company's, and its segments', operational performance on a period-over-period historical basis and, as a result, provide a better indication of expected future trends.

Adjusted Tax Rate and Provision for Income Taxes

In interim periods, Eastman discloses non-GAAP earnings with an adjusted effective tax rate and a resulting adjusted provision for income taxes using the Company's forecasted tax rate for the full year as of the end of the interim period. The adjusted effective tax rate and resulting adjusted provision for income taxes are equal to the Company's projected full year effective tax rate and provision for income taxes on earnings excluding non-core, unusual, or non-recurring items for completed periods. The adjusted effective tax rate and resulting adjusted provision for income taxes may fluctuate during the year for changes in events and circumstances that change the Company's forecasted annual effective tax rate and resulting provision for income taxes excluding non-core, unusual, or non-recurring items. Management discloses this adjusted effective tax rate, and the related reconciliation to the GAAP effective tax rate, to provide investors more complete and consistent comparisons of the Company's operational performance on a period-over-period interim basis and on the same basis as management evaluates quarterly financial results to provide a better indication of expected full year results.

Non-GAAP Cash Flow Measure

Eastman regularly evaluates and discloses to investors and securities analysts an alternative non-GAAP measure of "free cash flow", which management defines as net cash provided by operating activities, less the amount of net capital expenditures (typically the GAAP measure additions to properties and equipment, and in 2018 net of proceeds from property insurance). Such net capital expenditures are generally funded from available cash and, as such, management believes they should be considered in determining free cash flow. Management believes this is an appropriate metric to assess the Company's ability to fund priorities for uses of available cash. The priorities for cash after funding operations include payment of quarterly dividends, repayment of debt, funding targeted growth opportunities, and repurchasing shares. Management believes this metric is useful to investors and securities analysts in order to provide them with information similar to that used by management in evaluating financial performance and potential future cash available for various initiatives and assessing organizational performance in determining certain performance-based compensation and because management believes investors and securities analysts often use a similar measure of free cash flow to compare the results, and value, of comparable companies. In addition, Eastman may disclose to investors and securities analysts an alternative non-GAAP measure of "free cash flow yield", which management defines as annual free cash flow divided by the Company's market capitalization. Management believes this metric is useful to investors and securities analysts in comparing cash flow generation with that of peer and other companies.

Non-GAAP Measures in this Annual Report

The following non-core items are excluded by management in its evaluation of certain earnings results in this Annual Report:

- MTM pension and other postretirement benefit plans gains and losses resulting from the changes in discount rates and other actuarial assumptions and the difference between actual and expected returns on plan assets during the period;
- Asset impairments and restructuring charges, including severance costs and site closure or shutdown charges, net, of which asset impairments are non-cash transactions impacting profitability;
- Early debt extinguishment and other related costs resulting from repayment of borrowings;
- Cost of disposition of claims against operations that were discontinued by Solutia, Inc. ("Solutia") prior to the Company's acquisition of Solutia in 2012;
- Gain from sale of the formulated electronics cleaning solutions business, which was part of the Additives & Functional Products segment; and
- Tax benefit associated with a previously impaired site.

The following unusual items are excluded by management in its evaluation of certain earnings results in this Annual Report:

- Costs of, and income from insurance for, the coal gasification incident;
- Costs of currency transaction and professional fees resulting from fourth quarter 2017 tax law changes and related outside-U.S. entity reorganizations; and
- Estimated net tax benefit recognized in fourth quarter 2017 resulting from tax law changes, primarily the Tax Reform Act, and tax impact of related outside-U.S. entity reorganizations and related subsequent adjustments recognized in 2018 and 2019.

As described above, the alternative non-GAAP measure "free cash flow" is presented in this Annual Report.

Non-GAAP Financial Measures - Non-Core and Unusual Items Excluded from Earnings

(Dollars in millions)	2019	2018	2017
Non-core items impacting EBIT:			
Mark-to-market pension and other postretirement benefits (gain) loss, net	$ 143	$ 99	$ (21)
Asset impairments and restructuring charges, net	126	45	8
Cost of disposition of claims against discontinued Solutia operations	—	—	9
Gains from sale of businesses	—	—	(3)
Unusual items impacting EBIT:			
Net coal gasification incident (insurance) costs	—	(83)	112
Costs resulting from tax law changes and outside-U.S. entity reorganizations	—	20	—
Total non-core and unusual items impacting EBIT	269	81	105
Non-core item impacting earnings before income taxes:			
Early debt extinguishment and other related costs	—	7	—
Total non-core item impacting earnings before income taxes	—	7	—
Less: Items impacting provision for (benefit from) income taxes:			
Tax effect for non-core and unusual items	47	16	30
Tax benefit associated with previously impaired site	—	—	8
Estimated net tax (expense) benefit from tax law changes and tax loss from outside-U.S. entity reorganizations	(7)	(20)	339
Total items impacting provision for (benefit from) income taxes	40	(4)	377
Total items impacting net earnings attributable to Eastman	$ 229	$ 92	$ (272)

Below is the calculation of the "Other components of post-employment (benefit) cost, net" that are not included in the above non-core item "mark-to-market pension and other postretirement benefits gain (loss), net" and that are included in the non-GAAP results.

(Dollars in millions)	2019	2018	2017
Other components of post-employment (benefit) cost, net	$ 60	$ (21)	$ (135)
Service cost	41	49	53
Net periodic benefit (credit) cost	101	28	(82)
Less: Mark-to-market (gain) loss	143	99	(21)
Components of post-employment (benefit) cost, net included in non-GAAP earnings measures	$ (42)	$ (71)	$ (61)

Below is the calculation of the MTM pension and other post-retirement benefits (gain) loss disclosed above.

(Dollars in millions)	2019		2018		2017	
Actual return and percentage of return on assets	$ 406	15%	$ (82)	(3)%	$ 314	11%
Less: expected return on assets	165	6%	189	7 %	180	7%
Mark-to-market (loss) gain on assets	241		(271)		134	
Actuarial (loss) gain	(384)		172		(113)	
Total mark-to-market (loss) gain	$ (143)		$ (99)		$ 21	

For more detail about MTM pension and other postretirement benefit plans net gains and losses, including actual and expected return on plan assets and the components of the net gain or loss, see "Critical Accounting Estimates - Pension and Other Postretirement Benefits" above, and Note 10, "Retirement Plans", "Summary of Changes - Actuarial (gain) loss, Actual return on plan assets, and Reserve for third party contributions", and "Summary of Benefit Costs and Other Amounts Recognized in Other Comprehensive Income - Mark-to-market pension and other postretirement benefits (gain) loss, net" to the Company's consolidated financial statements in Part II, Item 8 of this Annual Report.

This MD&A includes the effect of the foregoing on the following GAAP financial measures:

- Gross profit,
- Selling, general and administrative ("SG&A") expenses,
- Other components of post-employment (benefit) cost, net,
- Other (income) charges, net,
- EBIT,
- Provision for (benefit from) income taxes,
- Net earnings attributable to Eastman,
- Diluted EPS, and
- Net cash provided by operating activities.

Other Non-GAAP Financial Measures

Alternative Non-GAAP Cash Flow Measure

In addition to the non-GAAP measures presented in this Annual Report and other periodic reports, management occasionally has evaluated and disclosed to investors and securities analysts the non-GAAP measure cash provided by or used in operating activities excluding certain non-core, unusual, or non-recurring sources or uses of cash or including cash from or used by activities that are managed as part of core business operations ("adjusted cash provided by or used in operating activities") when analyzing, among other things, business performance, liquidity and financial position, and performance-based compensation. Management has used this non-GAAP measure in conjunction with the GAAP measure cash provided by or used in operating activities because it believes it is an appropriate metric to evaluate the cash flows from Eastman's core operations that are available for organic and inorganic growth initiatives and because it allows for a more consistent period-over-period presentation of such amounts. In its evaluation, management generally excludes the impact of certain non-core activities and decisions of management that it considers not core, ongoing components of operations and the decisions to undertake or not to undertake such activities may be made irrespective of the cash generated from operations, and generally includes cash from or used in activities that are managed as operating activities and in business operating decisions. Management has disclosed this non-GAAP measure and the related reconciliation to investors and securities analysts to allow them to better understand and evaluate the information used by management in its decision-making processes and because management believes investors and securities analysts use similar measures to assess Company performance, liquidity, and financial position over multiple periods and to compare these with other companies.

Alternative Non-GAAP Earnings Measures

From time to time, Eastman may also disclose to investors and securities analysts the non-GAAP earnings measures "EBIT Margin", "Adjusted EBITDA", "EBITDA Margin", and "Return on Invested Capital" (or "ROIC"). Management defines EBIT Margin as the GAAP measure EBIT adjusted to exclude the same non-core, unusual, or non-recurring items as are excluded from the Company's other non-GAAP earnings measures for the same periods divided by the GAAP measure sales revenue in the Company's income statement for the same period. Adjusted EBITDA is EBITDA (net earnings before interest, taxes, depreciation and amortization) adjusted to exclude the same non-core, unusual, or non-recurring items as are excluded from the Company's other non-GAAP earnings measures for the same periods. EBITDA Margin is Adjusted EBITDA divided by the GAAP measure sales revenue in the Company's income statement for the same periods. Management defines ROIC as net earnings plus interest expense after tax divided by average total borrowings plus average stockholders' equity for the periods presented, each derived from the GAAP measures in the Company's financial statements for the periods presented. Management believes that EBIT Margin, Adjusted EBITDA, EBITDA Margin, and ROIC are useful as supplemental measures in evaluating the performance of and returns from Eastman's operating businesses, and from time to time uses such measures in internal performance calculations. Further, management understands that investors and securities analysts often use similar measures of EBIT Margin, Adjusted EBITDA, EBITDA Margin, and ROIC to compare the results, returns, and value of the Company with those of peer and other companies.

OVERVIEW

Eastman's products and operations are managed and reported in four operating segments: Additives & Functional Products ("AFP"), Advanced Materials ("AM"), Chemical Intermediates ("CI"), and Fibers. Eastman uses an innovation-driven growth model which consists of leveraging world class scalable technology platforms, delivering differentiated application development capabilities, and relentlessly engaging the market. The Company's world class technology platforms form the foundation of sustainable growth by differentiated products through significant scale advantages in research and development ("R&D") and advantaged global market access. Differentiated application development converts market complexity into opportunities for growth and accelerates innovation by enabling a deeper understanding of the value of Eastman's products and how they perform within customers' and end-user products. Key areas of application development include thermoplastic conversion, functional films, coatings formulations, rubber additive formulations, adhesives formulations, nonwovens and textiles, animal nutrition, and chemical and plastics recycling technologies. The Company engages the market by working directly with customers and downstream users, targeting attractive niche markets, and leveraging disruptive macro trends. Management believes that these elements of the Company's innovation-driven growth model, combined with disciplined portfolio management and balanced capital deployment, will result in consistent, sustainable earnings growth and strong cash flow.

The Company generated sales revenue of $9.3 billion and $10.2 billion for 2019 and 2018, respectively. EBIT was $1.1 billion and $1.6 billion in 2019 and 2018, respectively. Excluding the non-core and unusual items referenced in "Non-GAAP Financial Measures", adjusted EBIT was $1.4 billion and $1.6 billion in 2019 and 2018, respectively. Discussion of sales revenue and EBIT changes is presented in "Results of Operations" and "Summary by Operating Segment" in this MD&A.

Net earnings and EPS and adjusted net earnings and EPS were as follows:

	2019		2018	
(Dollars in millions, except diluted EPS)	$	EPS	$	EPS
Net earnings attributable to Eastman	$ 759	$ 5.48	$ 1,080	$ 7.56
Total non-core and unusual items, net of tax	229	1.65	92	0.64
Net earnings attributable to Eastman excluding non-core and unusual items	$ 988	$ 7.13	$ 1,172	$ 8.20

The Company generated $1.5 billion of cash from operating activities in both 2019 and 2018. Free cash flow was $1.1 billion in both 2019 and 2018.

As previously reported, in fourth quarter 2017 an explosion in the Kingsport site's coal gasification area disrupted manufacturing operations, primarily for the Fibers and CI segments which are significant internal users of cellulose and acetyl stream intermediates. The incident, net of insurance, reduced 2017 earnings by $112 million and increased 2018 earnings by $83 million. The cumulative net costs of the incident were $29 million. Costs net of insurance of the disruption, repairs, and reconstruction of coal gasification operations in 2017 were recognized in "Cost of sales" and insurance net of costs in 2018 was recognized in "Cost of sales" and "Other (income) charges, net" in the Consolidated Statements of Earnings, Comprehensive Income and Retained Earnings.

RESULTS OF OPERATIONS

Eastman's results of operations as presented in the Company's consolidated financial statements in Part II, Item 8 of this Annual Report are summarized and analyzed below.

Sales

	2019 Compared to 2018			2018 Compared to 2017		
(Dollars in millions)	2019	2018	Change	2018	2017	Change
Sales	$ 9,273	$ 10,151	(9)%	$ 10,151	$ 9,549	6%
Volume / product mix effect			(4)%			2%
Price effect			(4)%			3%
Exchange rate effect			(1)%			1%

2019 Compared to 2018

Sales revenue decreased as a result of decreases in all operating segments. Further discussion by operating segments is presented in "Summary of Operating Segment" in this MD&A.

2018 Compared to 2017

Sales revenue increased as a result of increases in all operating segments.

Gross Profit

	2019 Compared to 2018			2018 Compared to 2017		
(Dollars in millions)	2019	2018	Change	2018	2017	Change
Gross profit	$ 2,234	$ 2,479	(10)%	$ 2,479	$ 2,363	5 %
Net coal gasification incident (insurance) costs	—	(18)		(18)	112	
Gross profit excluding unusual item	$ 2,234	$ 2,461	(9)%	$ 2,461	$ 2,475	(1)%

2019 Compared to 2018

Gross profit included coal gasification incident insurance in excess of costs in 2018. Excluding this unusual item, gross profit decreased due to lower sales volume and an unfavorable shift in foreign currency exchange rates across all operating segments. Further discussion by operating segment is presented in "Summary by Operating Segment" in this MD&A.

2018 Compared to 2017

Gross profit included coal gasification incident insurance in excess of costs in 2018 and coal gasification incident net costs in 2017. Excluding these unusual items, gross profit decreased primarily due to raw material, energy, and distribution costs exceeding selling prices across most segments and higher growth initiative costs being partially offset by higher sales volume in the AM and AFP segments.

Selling, General and Administrative Expenses

	2019 Compared to 2018			2018 Compared to 2017		
(Dollars in millions)	2019	2018	Change	2018	2017	Change
Selling, general and administrative expenses	$ 691	$ 721	(4)%	$ 721	$ 729	(1)%
Costs resulting from tax law changes and outside-U.S. entity reorganizations	—	(7)		(7)	—	
Selling, general and administrative expenses excluding unusual item	$ 691	$ 714	(3)%	$ 714	$ 729	(2)%

2019 Compared to 2018

SG&A expenses in 2018 included $7 million of costs of professional fees resulting from fourth quarter 2017 tax law changes and related outside-U.S. entity reorganizations as part of the transition to an international treasury services center. Excluding this item, SG&A expenses decreased primarily due to lower variable compensation costs resulting from Company performance and cost management actions.

2018 Compared to 2017

SG&A expenses in 2018 included $7 million of costs of professional fees resulting from fourth quarter 2017 tax law changes and related outside-U.S. entity reorganizations as part of the transition to an international treasury services center. Excluding this item, SG&A expenses decreased primarily due to lower variable compensation costs mostly offset by higher costs of growth initiatives.

Research and Development Expenses

	2019 Compared to 2018			2018 Compared to 2017		
(Dollars in millions)	2019	2018	Change	2018	2017	Change
Research and development expenses	$ 234	$ 235	— %	$ 235	$ 227	4%

2019 Compared to 2018

R&D expenses were relatively unchanged.

2018 Compared to 2017

R&D expenses increased primarily due to higher costs of growth initiatives.

Asset Impairments and Restructuring Charges, Net

	For years ended December 31,		
(Dollars in millions)	2019	2018	2017
Asset impairments	$ 27	$ —	$ 1
Intangible asset and goodwill impairments	45	39	—
Severance charges	45	6	6
Site closure and restructuring charges	9	—	1
Total	$ 126	$ 45	$ 8

In December 2019, management approved a plan to discontinue production of certain products at the Singapore manufacturing site by the end of 2020 resulting in an asset impairment charge of $27 million. Eastman is evaluating alternative uses for the site after the end of 2020. Additional restructuring charges of up to $50 million are expected in 2020. This action is projected to result in an estimated annual earnings benefit of approximately $25 million within the AFP and CI segments beginning mostly in 2021.

As a result of the annual impairment test of goodwill the Company reduced the carrying value of the crop protection reporting unit (part of the AFP segment) to its estimated fair value through recognition of a $45 million goodwill impairment. The impairment was primarily due to the recent and expected continuing impact of recent regulatory changes in the European Union and a decrease in the long-term growth rate assumed for the reporting unit in the goodwill impairment model.

In 2019, as part of business improvement and cost reduction initiatives, the Company recognized restructuring charges of $45 million for severance and $5 million for related costs. Management anticipated total cost savings from these actions of approximately $50 million, most of which was recognized in 2019 primarily in cost of sales and SG&A expenses. Additionally, in 2019 the Company recognized a $4 million restructuring charge related to a capital project in the AFP segment that was discontinued in 2016.

In 2018, asset impairments and restructuring charges, net consisted of restructuring charges of approximately $6 million for severance. As a result of the annual impairment test of goodwill the Company reduced the carrying value of the crop protection reporting unit (part of the AFP segment) to its estimated fair value through recognition of a $38 million goodwill impairment. The impairment was primarily due to an increase in the WACC applied to the impairment analysis and the estimated impact of future regulatory changes. Additionally, the Company recognized an intangible asset impairment of $1 million in the AM segment.

In 2017, asset impairments and restructuring charges, net were $3 million of asset impairments and restructuring charges, including severance, in the AFP segment related to the closure of a facility in China and restructuring charges of approximately $5 million for severance.

Other Components of Post-employment (Benefit) Cost, Net

	2019 Compared to 2018			2018 Compared to 2017		
(Dollars in millions)	**2019**	**2018**	**Change**	**2018**	**2017**	**Change**
Other components of post-employment (benefit) cost, net	$ 60	$ (21)	>(100%)	$ (21)	$ (135)	(84)%
Mark-to-market pension and other postretirement benefit gain (loss), net	(143)	(99)		(99)	21	
Other components of post-employment (benefit) cost, net excluding non-core item	$ (83)	$ (120)	(31)%	$ (120)	$ (114)	5 %

For more information regarding "Other components of post-employment (benefit) cost, net" see Note 1, "Significant Accounting Policies", and Note 10, "Retirement Plans", to the Company's consolidated financial statements in Part II, Item 8 of this Annual Report.

Other (Income) Charges, Net

(Dollars in millions)	2019	2018	2017
Foreign exchange transaction losses (gains), net [1]	$ 9	$ 12	$ 5
Currency transaction costs resulting from tax law changes and outside-U.S. entity reorganizations	—	13	—
(Income) loss from equity investments and other investment (gains) losses, net	(10)	(17)	(12)
Coal gasification incident property insurance	—	(65)	—
Cost of disposition of claims against discontinued Solutia operations	—	—	9
Gain from sale of business [2]	—	—	(3)
Other, net	4	4	5
Other (income) charges, net	$ 3	$ (53)	$ 4
Currency transaction costs resulting from tax law changes and outside-U.S. entity reorganizations	—	(13)	—
Coal gasification incident property insurance	—	65	—
Cost of disposition of claims against discontinued Solutia operations	—	—	(9)
Gain from sale of business [2]	—	—	3
Other (income) charges, net excluding non-core and unusual items	$ 3	$ (1)	$ (2)

(1) Net impact of revaluation of foreign entity assets and liabilities and effect of foreign exchange non-qualifying derivatives.
(2) Gain from sale of the AFP segment formulated electronic cleaning solution business.

Earnings Before Interest and Taxes

	2019 Compared to 2018			2018 Compared to 2017		
(Dollars in millions)	2019	2018	Change	2018	2017	Change
EBIT	$ 1,120	$ 1,552	(28)%	$ 1,552	$ 1,530	1 %
Mark-to-market pension and other postretirement benefit (gain) loss, net	143	99		99	(21)	
Net coal gasification incident (insurance) costs	—	(83)		(83)	112	
Asset impairments and restructuring charges, net	126	45		45	8	
Costs resulting from tax law changes and outside-U.S. entity reorganizations	—	20		20	—	
Cost of disposition of claims against discontinued Solutia operations	—	—		—	9	
Gains from sale of businesses	—	—		—	(3)	
EBIT excluding non-core and unusual items	$ 1,389	$ 1,633	(15)%	$ 1,633	$ 1,635	— %

Net Interest Expense

	2019 Compared to 2018			2018 Compared to 2017		
(Dollars in millions)	2019	2018	Change	2018	2017	Change
Gross interest expense	$ 225	$ 242		$ 242	$ 251	
Less: Capitalized interest	4	4		4	7	
Interest Expense	221	238		238	244	
Less: Interest income	3	3		3	3	
Net interest expense	$ 218	$ 235	(7)%	$ 235	$ 241	(2)%

2019 Compared to 2018

Net interest expense decreased $17 million primarily as a result of U.S. dollar to euro cross-currency swaps, reduced debt balances, and lower interest rates.

2018 Compared to 2017

Net interest expense decreased $6 million primarily as a result of U.S. dollar to euro cross-currency swaps and reduced debt partly offset by increased interest rates.

Early Debt Extinguishment and Other Related Costs

In fourth quarter 2018, the Company sold 3.5% notes due December 2021 in the principal amount of $300 million and 4.5% notes due December 2028 in the principal amount of $500 million. Net proceeds from the notes were $789 million and were used, together with available cash, for the early and full repayment of the 5.5% notes due November 2019 ($250 million principal) and the partial redemption of the 2.7% notes due January 2020 ($550 million principal). Total consideration for these prepayments were $806 million ($800 million total principal and $6 million for the early redemption premiums) and are reported as financing activities on the Consolidated Statements of Cash Flows. The early repayment resulted in a charge of $7 million for early debt extinguishment costs which was primarily attributable to the early redemption premiums and related unamortized costs. The book value of the redeemed debt was $799 million.

For additional information regarding the early debt extinguishment costs, see Note 8, "Borrowings", to the Company's consolidated financial statements in Part II, Item 8 of this Annual Report.

Provision for (Benefit from) Income Taxes

(Dollars in millions)	2019		2018		2017	
	$	%	$	%	$	%
Provision for (benefit from) income taxes and effective tax rate	$ 140	16%	$ 226	17%	$ (99)	(8)%
Tax provision for non-core and unusual items[(1)]	47		16		30	
Tax benefit associated with previously impaired site	—		—		8	
Estimated net tax (expense) benefit from tax law changes and tax loss from outside-U.S. entity reorganizations	(7)		(20)		339	
Adjusted provision for income taxes and effective tax rate	$ 180	15%	$ 222	16%	$ 278	20 %

(1) Provision for income taxes for non-core and unusual items is calculated using the tax rate for the jurisdiction where the gains are taxable and the expenses are deductible.

The 2019 effective tax rate includes a $7 million increase to the provision for income taxes resulting from adjustments to the net tax benefit recognized in fourth quarter 2017 resulting from tax law changes, primarily the Tax Reform Act and from outside-U.S. entity reorganizations. The 2019 effective tax rate also includes adjustments to the tax provision to reflect finalization of prior year's income tax returns and an increase to state income taxes related to additional valuation allowance provided against state income tax credits.

The 2018 effective tax rate included a $20 million increase to the provision for income taxes resulting from adjustments to the net tax benefit recognized in fourth quarter 2017 resulting from tax law changes, primarily the Tax Reform Act, and from outside-U.S. entity reorganizations. These adjustments related to the one-time transition tax on deferred foreign income and changes in valuation of deferred tax assets associated with tax law changes and outside-U.S. entity reorganizations as part of the formation of an international treasury services center.

The 2017 effective tax rate included a $339 million net benefit resulting from tax law changes, primarily the Tax Reform Act, and a tax loss from outside-U.S. entity reorganizations as part of the formation of an international treasury services center, a $20 million benefit due to amendments to prior years' domestic income tax returns, and a $30 million benefit reflecting the finalization of prior years' foreign income tax returns. The 2017 effective tax rate also includes an $8 million tax benefit due to a tax ruling permitting deductibility of a liquidation loss on a previously impaired site.

For more information, see Note 7, "Income Taxes", to the Company's consolidated financial statements in Part II, Item 8 of this Annual Report.

Net Earnings Attributable to Eastman and Diluted Earnings per Share

	2019		2018		2017	
(Dollars in millions, except per share amounts)	$	EPS	$	EPS	$	EPS
Net earnings and diluted earnings per share attributable to Eastman	$ 759	$ 5.48	$ 1,080	$ 7.56	$ 1,384	$ 9.47
Non-core items, net of tax: [1]						
Mark-to-market pension and other postretirement benefit (gain) loss, net	109	0.79	75	0.52	(14)	(0.09)
Asset impairments and restructuring charges (gain), net	113	0.81	43	0.30	(3)	(0.02)
Early debt extinguishment and other related costs	—	—	6	0.04	—	—
Cost of disposition of claims against discontinued Solutia operations	—	—	—	—	5	0.03
Gains from sale of businesses	—	—	—	—	(1)	(0.01)
Unusual items, net of tax: [1]						
Net coal gasification incident (insurance) costs	—	—	(67)	(0.47)	80	0.55
Estimated net tax expense (benefit) from tax law changes and tax loss from outside-U.S. entity reorganizations	7	0.05	20	0.14	(339)	(2.32)
Costs resulting from tax law changes and outside-U.S. entity reorganizations	—	—	15	0.11	—	—
Adjusted net earnings and diluted earnings per share attributable to Eastman	$ 988	$ 7.13	$ 1,172	$ 8.20	$ 1,112	$ 7.61

(1) The provision for income taxes for non-core and unusual items is calculated using the tax rate for the jurisdiction where the gains are taxable and the expenses are deductible.

SUMMARY BY OPERATING SEGMENT

Eastman's products and operations are managed and reported in four operating segments: Additives & Functional Products ("AFP"), Advanced Materials ("AM"), Chemical Intermediates ("CI"), and Fibers. For additional financial and product information for each operating segment, see "Business - Business Segments" in Part I, Item 1 of this Annual Report and Note 19, "Segment and Regional Sales Information", to the Company's consolidated financial statements in Part II, Item 8 of this Annual Report.

Additives & Functional Products Segment

	2019 Compared to 2018				2018 Compared to 2017			
			Change				Change	
(Dollars in millions)	2019	2018	$	%	2018	2017	$	%
Sales	$ 3,273	$ 3,647	$ (374)	(10)%	$ 3,647	$ 3,343	$ 304	9 %
Volume / product mix effect			(177)	(5)%			151	4 %
Price effect			(133)	(3)%			98	3 %
Exchange rate effect			(64)	(2)%			55	2 %
EBIT	$ 496	$ 639	$ (143)	(22)%	$ 639	$ 653	$ (14)	(2)%
Asset impairments and restructuring charges, net	54	38	16		38	3	35	
Gain from sale of business	—	—	—		—	(3)	3	
Net coal gasification incident (insurance) costs	—	(6)	6		(6)	8	(14)	
EBIT excluding non-core and unusual items	550	671	(121)	(18)%	671	661	10	2 %

2019 Compared to 2018

Sales revenue decreased primarily due to lower sales volume, lower selling prices, and an unfavorable shift in foreign currency exchange rates. The lower sales volume was primarily attributed to weaker end-market demand resulting from global trade-related pressures, particularly in transportation markets and other consumer discretionary end markets. Lower selling prices were primarily due to lower raw material prices, including for care chemicals, and increased competitive pressure in markets for tire additives, animal nutrition, and adhesives resins.

EBIT in 2019 included a $45 million goodwill impairment of the crop protection business, an asset impairment charge of $5 million resulting from management's approval of a plan to discontinue production of certain products at the Singapore manufacturing site by the end of 2020, and a $4 million restructuring charge related to a capital project. EBIT in 2018 included a goodwill impairment charge related to the crop protection business and coal gasification incident insurance in excess of costs. Excluding these non-core and unusual items, EBIT decreased primarily due to lower selling prices of $133 million, lower sales volume of $101 million, and an unfavorable shift in foreign currency exchange rates of $22 million, partially offset by lower raw material costs of $136 million.

2018 Compared to 2017

Sales revenue increased due to higher sales volume, higher selling prices across most product lines, and a favorable shift in foreign currency exchange rates. The higher sales volume was primarily attributed to volume growth in care chemicals, coatings and inks additives, tire additives, and animal nutrition, and products previously reported in the CI segment.

EBIT in 2018 included a goodwill impairment charge related to the crop protection business and coal gasification incident insurance in excess of costs. EBIT in 2017 included net costs resulting from the coal gasification incident, asset impairment and restructuring charges, including severance, related to the closure of a facility in China, and a gain from sale of the formulated electronics cleaning solutions business. Excluding these non-core and unusual items, EBIT increased primarily due to higher sales volume of $54 million largely offset by higher raw material, energy, and distribution costs more than exceeding higher selling prices by $20 million, primarily due to fourth quarter competitive pressure in adhesives resins, and higher growth initiative costs of approximately $20 million.

Growth Initiatives

In 2019, the AFP segment:

- advanced growth and innovation of Regalite™ UltraPure hydrocarbon resin, a new class of clean tackifying hydrocarbon resins, through a capacity expansion at the Middelburg, Netherlands manufacturing site;
- acquired the Marlotherm™ heat transfer assets in Marl, Germany and the related formulations, intellectual property, and customer contracts, as a targeted addition to the specialty fluids business;
- advanced growth of Impera™ resins through capacity expansions for the production of performance resins for tires at both the Middelburg, Netherlands, and Jefferson, Pennsylvania, manufacturing sites to serve demand from tire manufacturers around the world for product solutions that enable improved safety, efficiency, and performance;
- continued to enhance our ability to serve the global customer base in low volatile organic compound ("VOC") coatings and other markets by completing the final phase of a ketones capacity expansion at the Kingsport, Tennessee manufacturing site in fourth quarter 2019; and
- responded to growing demand for purified water and sustainable waste water treatment across the globe with world scale production units for Dimethylaminoethanol ("DMAE"/"DMEA") in Europe (Belgium) and North America (Louisiana) and decided to expand capacity in China to respond to stricter regulation and rapidly growing demand in Asia (DMAE is used as a key component into flocculants that are critical for municipal and industrial water treatments).

Advanced Materials Segment

	2019 Compared to 2018				2018 Compared to 2017			
			Change				Change	
(Dollars in millions)	2019	2018	$	%	2018	2017	$	%
Sales	$ 2,688	$ 2,755	$ (67)	(2)%	$ 2,755	$ 2,572	$ 183	7%
Volume / product mix effect			(25)	(1)%			130	5%
Price effect			—	— %			22	1%
Exchange rate effect			(42)	(1)%			31	1%
EBIT	$ 517	$ 509	$ 8	2 %	$ 509	$ 483	$ 26	5%
Asset impairments and restructuring charges, net	1	1	—		1	—	1	
Net coal gasification incident (insurance) costs	—	(9)	9		(9)	11	(20)	
EBIT excluding non-core and unusual items	518	501	17	3 %	501	494	7	1%

2019 Compared to 2018

Sales revenue decreased due to lower sales volume and an unfavorable shift in foreign currency exchange rates. Increased sales volume of premium products, including paint protection film, Tritan™ copolyester, and Saflex™ acoustic and architectural interlayers, was more than offset by decreased sales volume of standard copolyester and interlayers products related to underlying market declines in transportation and consumer durable end markets.

EBIT in 2019 included a restructuring charge for severance costs. EBIT in 2018 included coal gasification incident insurance in excess of costs and a charge for an impairment of an indefinite-lived intangible asset. Excluding these non-core and unusual items, EBIT increased primarily due to lower raw material costs of $49 million, mostly offset by an unfavorable shift in foreign currency exchange rates of $23 million and lower sales volume of $16 million. The impact of lower sales volume was mostly offset by increased sales of certain premium products.

2018 Compared to 2017

Sales revenue increased primarily due to higher sales volume and improved product mix across the segment, including for premium products such as performance films, Saflex™ head-up displays, and Tritan™ copolyester. While 2018 had higher sales volume compared with 2017, fourth quarter 2018 had lower specialty plastics sales volume compared to fourth quarter 2017 attributed to customer inventory destocking related to uncertainty caused by the U.S. - China trade dispute.

EBIT in 2018 included coal gasification incident insurance in excess of costs and a charge for an impairment of an indefinite-lived intangible asset. EBIT in 2017 included net costs resulting from the coal gasification incident. Excluding these non-core and unusual items, EBIT increased primarily due to higher sales volume and improved product mix of premium products of $94 million, partially offset by higher raw material (particularly for paraxylene in the second half of the year), energy, and distribution costs of $67 million and higher growth initiative costs of approximately $25 million.

Growth Initiatives

In 2019, the AM segment:
- continued the growth of Tritan™ copolyester in the durable goods and health and wellness markets, supported by continued market and application development;
- strengthened growth in automotive paint protection films in North America and China through an improved sales channel, marketing, and commercial execution strategies and capabilities;
- finalized development and announced the launch of Eastman CORE (trademark and patent pending) next generation analytics-based software platform for automotive window and paint protection film products, enabling more efficient application and overall business management for dealers; and
- developed and enhanced Eastman's sustainability capabilities and commercial opportunities, including strategic collaborations with third parties to secure a consistent source of recyclable copolyester feedstock and to innovate new sustainable specialty plastic solutions.

Chemical Intermediates Segment

	2019 Compared to 2018				2018 Compared to 2017			
			Change				Change	
(Dollars in millions)	2019	2018	$	%	2018	2017	$	%
Sales	$ 2,443	$ 2,831	$ (388)	(14)%	$ 2,831	$ 2,728	$ 103	4 %
Volume / product mix effect			(122)	(4)%			(142)	(5)%
Price effect			(247)	(9)%			229	8 %
Exchange rate effect			(19)	(1)%			16	1 %
EBIT	$ 170	$ 308	$ (138)	(45)%	$ 308	$ 255	$ 53	21 %
Asset impairments and restructuring charges, net	22	—	22		—	—	—	
Net coal gasification incident (insurance) costs	—	(30)	30		(30)	44	(74)	
EBIT excluding unusual item	192	278	(86)	(31)%	278	299	(21)	(7)%

2019 Compared to 2018

Sales revenue decreased primarily due to lower selling prices across the segment attributed to lower raw material prices and increased competitive activity. Sales revenue was also negatively impacted by lower functional amines products sales volume attributed to weaker demand in agricultural end-markets resulting from wet weather in North America and lower intermediates products sales volume attributed to increased competitive activity.

EBIT in 2019 included an asset impairment charge resulting from management's approval of a plan to discontinue production of certain products at the Singapore manufacturing site by the end of 2020. EBIT in 2018 included coal gasification incident insurance in excess of costs. Excluding these non-core and unusual items, EBIT decreased primarily due to lower selling prices more than offsetting lower raw material costs of $63 million and lower sales volumes of $9 million.

2018 Compared to 2017

Sales revenue increased due to higher selling prices across most product lines, particularly for acetyl derivatives attributed to favorable market conditions and for olefin derivatives due to higher raw material and energy costs. Higher selling prices were partially offset by lower sales volume primarily attributable to lower merchant ethylene sales, products previously reported in the CI segment being reported in the AFP segment in 2018, and supplier operational disruptions at the Texas City and Longview, Texas manufacturing facilities. Lower merchant ethylene sales are primarily due to the decision to reduce operating rates of the olefins cracking units at the Longview, Texas manufacturing facility due to spot ethylene prices. Lower sales volume was partially offset by higher functional amines products sales attributed to strengthened agriculture and energy markets.

EBIT included coal gasification incident insurance in excess of costs in 2018 and coal gasification incident net costs in 2017. Excluding these unusual items, EBIT decreased due to lower sales volume of $62 million, and higher planned manufacturing shutdown costs of $21 million. The decrease was partially offset by higher selling prices exceeding higher raw material, energy, and distribution costs of $61 million.

Cost and Growth Initiatives

To maintain and enhance its status as a low-cost producer and optimize earnings, the CI segment continuously focuses on cost control, operational efficiency, and capacity utilization. This includes focusing on products used internally by other operating segments, thereby supporting growth in specialty product lines throughout the Company, and also external licensing opportunities.

In 2018, the Company completed modifications to the olefin cracking units at the Longview, Texas manufacturing site. These modifications allowed for the introduction of refinery-grade propylene ("RGP") into the feedstock mix while also reducing the amount of other purchased feedstocks. This feedstock shift resulted in a significant decrease in ethylene production and excess ethylene sales in 2019, while maintaining historical levels of propylene production. The RGP project provided the flexibility to significantly reduce the Company's participation in the merchant ethylene market, while retaining a cost-advantaged integrated propylene position to support specialty derivatives throughout the Company.

Fibers Segment

(Dollars in millions)	2019 Compared to 2018				2018 Compared to 2017			
			Change				Change	
	2019	2018	$	%	2018	2017	$	%
Sales	$ 869	$ 918	$ (49)	(5)%	$ 918	$ 852	$ 66	8 %
Volume / product mix effect			(38)	(4)%			95	11 %
Price effect			(7)	(1)%			(30)	(3)%
Exchange rate effect			(4)	— %			1	— %
EBIT	$ 194	$ 257	$ (63)	(25)%	$ 257	$ 181	$ 76	42 %
Net coal gasification incident (insurance) costs	—	(38)	38		(38)	49	(87)	
EBIT excluding non-core and unusual items	194	219	(25)	(11)%	219	230	(11)	(5)%

2019 Compared to 2018

Sales revenue decreased primarily due to lower acetate tow sales volume attributed to weakened market demand resulting from general market decline and customer buying patterns.

EBIT included coal gasification incident insurance in excess of costs in 2018. Excluding this unusual item, EBIT decreased primarily due to lower acetate tow sales volume of $24 million.

2018 Compared to 2017

Sales revenue increased primarily due to sales of nonwovens products previously reported in "Other" of $57 million and higher sales volume, particularly for textiles products. The higher sales revenue was partially offset by lower selling prices, particularly for acetate tow. Lower acetate tow selling prices were primarily attributed to lower industry capacity utilization.

EBIT included coal gasification incident insurance in excess of costs in 2018 and coal gasification incident net costs in 2017. Excluding these unusual items, EBIT decreased primarily due to the net impact of $7 million of lower selling prices, particularly for acetate tow attributed to lower capacity utilization, and higher raw material and energy costs, partially offset by volume growth of textiles products.

Cost and Growth Initiatives

In 2019 the Company acquired Industrias del Acetato de Celulosa. S.A. ("INACSA"), a cellulosic yarn business in LA Batllòria, Spain as a targeted addition to the Fibers segment's acetate yarn business.

The Fibers segment R&D efforts focus on serving existing customers, leveraging proprietary cellulose ester and spinning technology for differentiated application development in new markets, optimizing asset productivity, and working with suppliers to reduce costs. For acetate tow, these efforts are assisting customers in the effective use of the segment's products and customers' product development efforts. Beyond acetate tow, management is applying the innovation-driven growth model to leverage its fibers technology and expertise to focus on innovative growth in the textiles and nonwovens markets. Examples of recent product innovation within the Fibers segment include Naia™ yarn for the apparel market developed from Eastman's proprietary cellulose ester technology; Avra™ performance fibers for the apparel, home furnishings and industrial fabrics markets developed from a combination of Eastman proprietary spinning technology and polymer chemistry enabling unique fiber capabilities of size, shape, comfort, and performance; and Vestera™ wood pulp-based alternative for the nonwoven industry used in personal hygiene applications.

Other

(Dollars in millions)	2019	2018	2017
Sales	$ —	$ —	$ 54
Loss before interest and taxes			
Growth initiatives and businesses not allocated to operating segments	$ (102)	$ (114)	$ (114)
Pension and other postretirement benefit plans income (expense), net not allocated to operating segments	(97)	(17)	93
Asset impairments and restructuring charges, net	(49)	(6)	(5)
Other income (charges), net not allocated to operating segments	(9)	(24)	(16)
Loss before interest and taxes before non-core and unusual items	$ (257)	$ (161)	$ (42)
Mark-to-market pension and other postretirement benefit plans (gain) loss, net	143	99	(21)
Asset impairments and restructuring charges, net	49	6	5
Cost of disposition of claims against discontinued Solutia operations	—	—	9
Costs resulting from tax law changes and outside-U.S. entity reorganizations	—	20	—
Loss before interest and taxes excluding non-core and unusual items	(65)	(36)	(49)

Sales revenue and costs related to growth initiatives, R&D costs, certain components of pension and other postretirement benefits, and other expenses and income not identifiable to an operating segment are not included in segment operating results for any periods presented and are included in "Other". See "Eastman Chemical Company General Information - Research and Development", in Part I, Item 1 of this Annual Report.

Sales revenue in 2017 was primarily sales from the nonwovens products. Beginning first quarter 2018, sales revenue and innovation costs from the nonwovens and textiles innovation products previously reported in "Other" are reported in the Fibers segment due to accelerating commercial progress of growth initiatives. See Note 19, "Segment and Regional Sales Information", to the Company's consolidated financial statements in Part II, Item 8 of this Annual Report.

SALES BY CUSTOMER LOCATION

	Sales Revenue							
			Change				Change	
(Dollars in millions)	2019	2018	$	%	2018	2017	$	%
United States and Canada	$ 3,885	$ 4,303	$ (418)	(10)%	$ 4,303	$ 4,189	$ 114	3%
Europe, Middle East, and Africa	2,544	2,756	(212)	(8)%	2,756	2,539	217	9%
Asia Pacific	2,278	2,504	(226)	(9)%	2,504	2,306	198	9%
Latin America	566	588	(22)	(4)%	588	515	73	14%
Total	$ 9,273	$ 10,151	$ (878)	(9)%	$ 10,151	$ 9,549	$ 602	6%

2019 Compared to 2018

Sales revenue in United States and Canada decreased primarily due to lower selling prices and lower sales volume in all operating segments, particularly in the CI and AFP segments.

Sales revenue in Europe, Middle East, and Africa decreased primarily due to unfavorable foreign currency exchange rates in all operating segments, lower AFP segment selling prices, and lower AFP and CI segments sales volume. These items were partially offset by higher sales volume in the AM segment.

Sales revenue in Asia Pacific decreased primarily due to lower sales volume in all operating segments, particularly in the AFP and AM segments, and lower CI and AFP segments selling prices.

Sales revenue in Latin America decreased primarily due to lower selling prices, particularly in the CI segment.

2018 Compared to 2017

Sales revenue in United States and Canada increased primarily due to higher CI, AFP, and AM segments selling prices and higher AFP and AM segments sales volume. The increase was partially offset by lower CI segment sales volume, primarily resulting from lower merchant ethylene sales.

Sales revenue in Europe, Middle East, and Africa increased primarily due to a favorable shift in foreign currency exchange rates across the segments, higher CI, AM, and Fibers segments sales volume, and higher AFP and CI segments selling prices. These items were partially offset by lower AFP segment sales volume.

Sales revenue in Asia Pacific increased primarily due to higher AFP and AM segments sales volume and higher CI and AFP segments selling prices partially offset by lower Fibers segment selling prices.

Sales revenue in Latin America increased primarily due to higher AM, AFP, and CI segments sales volume and higher CI segment selling prices.

See Note 19, "Segment and Regional Sales Information", in Part II, Item 8 of this Annual Report for segment sales revenues by customer location.

LIQUIDITY AND OTHER FINANCIAL INFORMATION

Cash Flows

The Company had cash and cash equivalents as follows:

(Dollars in millions)	December 31, 2019	2018	2017
Cash and cash equivalents	$ 204	$ 226	$ 191

Cash flows from operations, cash and cash equivalents, and other sources of liquidity are expected to be available and sufficient to meet foreseeable cash requirements. However, the Company's cash flows from operations can be affected by numerous factors including risks associated with global operations, raw material availability and cost, demand for and pricing of Eastman's products, capacity utilization, and other factors described under "Risk Factors" in this MD&A. Management believes maintaining a financial profile that supports an investment grade credit rating is important to its long-term strategy and financial flexibility.

(Dollars in millions)	For years ended December 31, 2019	2018	2017
Net cash provided by (used in):			
Operating activities	$ 1,504	$ 1,543	$ 1,657
Investing activities	(480)	(463)	(643)
Financing activities	(1,043)	(1,040)	(1,006)
Effect of exchange rate changes on cash and cash equivalents	(3)	(5)	2
Net change in cash and cash equivalents	(22)	35	10
Cash and cash equivalents at beginning of period	226	191	181
Cash and cash equivalents at end of period	$ 204	$ 226	$ 191

2019 Compared to 2018

Cash provided by operating activities decreased primarily due to lower net earnings, partially offset by lower net working capital (trade receivables, inventories, and trade payables).

Cash used in investing activities increased $17 million. Twelve months 2018 included $65 million proceeds from coal gasification incident insurance for property damage. Excluding this item, cash used in investing activities decreased $48 million due to lower capital expenditures partially offset by acquisitions of businesses in the AFP and Fibers segments. Lower capital expenditures were due to significant capital projects related to key growth initiatives being completed and put into service during 2018.

Cash used in financing activities was relatively unchanged with increased net debt repayments and dividend payments offset by lower share repurchases.

2018 Compared to 2017

Cash provided by operating activities decreased primarily due to increased inventory resulting from reduced demand and higher cost raw materials inventory in fourth quarter 2018.

Cash used in investing activities decreased primarily due to decreased capital expenditures as significant capital projects related to key growth initiatives were completed and put into service during 2018. See "Capital Expenditures" below.

Cash used in financing activities increased primarily due to increased share repurchases and dividend payments partially offset by reduced net debt repayments.

(Dollars in millions)	For years ended December 31, 2019	2018	2017
Net cash provided by operating activities	$ 1,504	$ 1,543	$ 1,657
Capital expenditures			
Additions to properties and equipment	(425)	(528)	(649)
Proceeds from property insurance [1]	—	65	—
Net capital expenditures	(425)	(463)	(649)
Free cash flow	$ 1,079	$ 1,080	$ 1,008

(1) Cash proceeds from insurance for coal gasification incident property damage.

Working Capital Management and Off Balance Sheet Arrangements

Eastman applies a proactive and disciplined approach to working capital management to optimize cash flow and to enable a full range of capital allocation options in support of the Company's strategy. Eastman expects to continue utilizing the programs described below to support free cash flow consistent with our past practices.

Eastman works with suppliers to optimize payment terms and conditions on accounts payable to enhance timing of working capital and cash flows. As part of these efforts, in 2019, the Company introduced a voluntary supply chain finance program to provide suppliers with the opportunity to sell receivables due from Eastman to a participating financial institution. A downgrade in Eastman's credit rating or changes in the financial markets could limit the financial institution's willingness to commit funds to, and participate in, the program. Management does not believe such risk would have a material impact on the Company's working capital or cash flows. See Note 1, "Significant Accounting Policies", to the Company's consolidated financial statements in Part II, Item 8 of this Annual Report for additional information regarding the program.

In 2019, the Company expanded off balance sheet, uncommitted accounts receivable factoring agreements under which entire invoices may be sold, without recourse, to third-party financial institutions. Available capacity under these agreements, which the Company uses as a source of working capital funding, is dependent on the level of accounts receivable eligible to be sold and the financial institutions' willingness to purchase such receivables. The total amount of receivables sold in 2019 and 2018 were $857 million and $219 million, respectively. Based on the original terms of receivables sold for certain agreements and actual outstanding balance of receivables under service agreements, the Company estimates that $169 million and $76 million of these receivables would have been outstanding as of December 31, 2019 and December 31, 2018, respectively, had they not been sold under these factoring agreements.

Revolving Credit Facilities and Commercial Paper Borrowings

The Company has access to a $1.50 billion revolving credit agreement (the "Credit Facility") expiring October 2023. Borrowings under the Credit Facility are subject to interest at varying spreads above quoted market rates and a commitment fee is paid on the total unused commitment. The Credit Facility provides available liquidity for general corporate purposes and supports commercial paper borrowings. Commercial paper borrowings are classified as short-term. At December 31, 2019, the Company had no outstanding borrowings under the Credit Facility. At December 31, 2019, commercial paper borrowings were $170 million with a weighted average interest rate of 2.03 percent. See Note 8, "Borrowings", to the Company's consolidated financial statements in Part II, Item 8 of this Annual Report.

The Company has access to up to $250 million under an accounts receivable securitization agreement (the "A/R Facility") that expires April 2020. Eastman Chemical Financial Corporation ("ECFC"), a subsidiary of the Company, has an agreement to sell interests in trade receivables under the A/R Facility to a third party purchaser. Third party creditors of ECFC have first priority claims on the assets of ECFC before those assets would be available to satisfy the Company's general obligations. Borrowings under the A/R Facility are subject to interest rates based on a spread over the lender's borrowing costs, and ECFC pays a fee to maintain availability of the A/R Facility. At December 31, 2019, the Company had no borrowings under the A/R Facility. See Note 8, "Borrowings", to the Company's consolidated financial statements in Part II, Item 8 of this Annual Report.

The Credit Facility and A/R Facility contain customary covenants, including requirements to maintain certain financial ratios, that determine the events of default, amounts available, and terms of borrowings. The Company was in compliance with all covenants at both December 31, 2019 and December 31, 2018. The amount of available borrowings under the A/R and Credit Facilities was approximately $1.75 billion as of December 31, 2019. For additional information, see Section 5.03 of the Credit Facility at Exhibit 10.01 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2018.

Debt and Other Commitments

(Dollars in millions)

	Payments Due for						
Period	**Debt Securities**	**Credit Facilities and Other**	**Interest Payable**	**Purchase Obligations**	**Operating Leases**	**Other Liabilities**	**Total**
2020	$ —	$ 171	$ 173	$ 181	$ 62	$ 241	$ 828
2021	483	—	186	156	49	81	955
2022	741	—	175	102	38	87	1,143
2023	840	—	156	91	25	87	1,199
2024	240	—	137	100	14	89	580
2025 and beyond	3,307	—	1,414	1,967	30	1,106	7,824
Total	$ 5,611	$ 171	$ 2,241	$ 2,597	$ 218	$ 1,691	$ 12,529

At December 31, 2019, Eastman's borrowings totaled approximately $5.8 billion with various maturities. In fourth quarter 2019, the Company repaid the 2.7% notes due January 2020 ($250 million principal) using available cash. In fourth quarter 2018 the Company refinanced certain outstanding public debt with proceeds of the sale of new debt securities, which extended the weighted average maturity of outstanding debt while retaining adequate levels of pre-payable debt and near-term maturities. Estimated future payments of debt securities assumes the repayment of principal upon stated maturity, and actual amounts and the timing of such payments may differ materially due to repayment or other changes in the terms of such debt prior to maturity. For information on debt securities, credit facilities and other, and interest payable, see Note 8, "Borrowings", to the Company's consolidated financial statements in Part II, Item 8 of this Annual Report.

For information about purchase obligations and operating leases, see Note 11, "Leases and Other Commitments", to the Company's consolidated financial statements in Part II, Item 8 of this Annual Report.

Amounts in other liabilities represent the current estimated cash payments required to be made by the Company primarily for pension and other postretirement benefits, environmental loss contingency reserves, accrued compensation benefits, uncertain tax liabilities, and commodity and foreign exchange hedging in the periods indicated. Due to uncertainties in the timing of the effective settlement of tax positions with respect to taxing authorities, management is unable to determine the timing of payments related to uncertain tax liabilities and these amounts are included in the "2025 and beyond" line item.

The amount and timing of pension and other postretirement benefit payments included in other liabilities is dependent upon interest rates, health care cost trends, actual returns on plan assets, retirement and attrition rates of employees, continuation or modification of the benefit plans, and other factors. Such factors can significantly impact the amount and timing of any future contributions by the Company. Excess contributions are periodically made by management in order to keep the plans' funded status above 80 percent under the funding provisions of the Pension Protection Act to avoid partial benefit restrictions on accelerated forms of payment. The Company's U.S. defined benefit pension plans are not currently under any benefit restrictions. See Note 10, "Retirement Plans", to the Company's consolidated financial statements in Part II, Item 8 of this Annual Report, for more information regarding pension and other postretirement benefit obligations.

The resolution of uncertainties related to environmental matters included in other liabilities may have a material adverse effect on the Company's consolidated results of operations in the period recognized, however, because of the availability of legal defenses, the Company's preliminary assessment of actions that may be required, and, if applicable, the expected sharing of costs, management does not believe that the Company's liability for these environmental matters, individually or in the aggregate, will be material to the Company's consolidated financial position, results of operations, or cash flows. See Note 1, "Significant Accounting Policies", to the Company's consolidated financial statements in Part II, Item 8 of this Annual Report for the Company's accounting policy for environmental costs, and see Note 12, "Environmental Matters and Asset Retirement Obligations", to the Company's consolidated financial statements in Part II, Item 8 of this Annual Report for more information regarding outstanding environmental matters and asset retirement obligations.

Capital Expenditures

Capital expenditures were $425 million, $528 million ($463 million net of proceeds from property damage insurance for 2017 coal gasification incident), and $649 million in 2019, 2018, and 2017, respectively. Capital expenditures in 2019 were primarily for targeted growth initiatives and site modernization projects at the Longview, Texas; Kingsport, Tennessee; and Jefferson, Pennsylvania manufacturing sites.

The Company expects that 2020 capital spending will be between $450 million and $475 million, primarily for targeted growth initiatives and site modernization projects.

The Company had capital expenditures related to environmental protection and improvement of approximately $27 million, $44 million, and $38 million in 2019, 2018, and 2017, respectively. The Company does not currently expect near term environmental capital expenditures arising from requirements of environmental laws and regulations to materially impact the Company's planned level of annual capital expenditures for environmental control facilities.

Stock Repurchases and Dividends

In February 2014, the Company's Board of Directors authorized the repurchase of up to $1 billion of the Company's outstanding common stock. The Company completed the $1 billion repurchase authorization in May 2018, acquiring a total of 12,215,950 shares. In February 2018, the Company's Board of Directors authorized the repurchase of up to an additional $2 billion of the Company's outstanding common stock at such times, in such amounts, and on such terms, as determined by management to be in the best interest of the Company. As of December 31, 2019, a total of 6,753,164 shares have been repurchased under the February 2018 authorization for a total amount of $573 million. During 2019, the Company repurchased a total of 4,282,409 shares for a total cost of approximately $325 million.

The Board of Directors has declared a cash dividend of $0.66 per share during the first quarter of 2020, payable on April 3, 2020 to stockholders of record on March 16, 2020.

INFLATION

In recent years, general economic inflation has not had a material adverse impact on Eastman's costs. The cost of raw materials is generally based on market prices, although derivative financial instruments are utilized, as appropriate, to mitigate short-term market price fluctuations. Management expects the volatility of raw material and energy prices and costs to continue and the Company will continue to pursue pricing and hedging strategies and ongoing cost control initiatives to offset the effects. For additional information, see Note 9, "Derivative and Non-Derivative Financial Instruments", to the Company's consolidated financial statements in Part II, Item 8 of this Annual Report.

RECENTLY ISSUED ACCOUNTING STANDARDS

For information regarding the impact of recently issued accounting standards, see Note 1, "Significant Accounting Policies", to Eastman's consolidated financial statements in Part II, Item 8 of this Annual Report.

OUTLOOK

In 2020, management expects adjusted EPS to be between $7.20 to $7.60 and free cash flow to be between $1.0 billion to $1.1 billion. These expectations assume:
- earnings to benefit from higher sales volume due to increased new business revenue, less market and customer inventory destocking, and stable growth in some end-markets, actions to reduce operating costs by $20 million to $40 million, and lower pension and depreciation costs;
- earnings to be negatively impacted by lower product margins in the CI segment and adhesive resins, tire additives, and animal nutrition products in the AFP segment, higher variable compensation costs, and a stronger U.S. dollar;
- interest expense of approximately $215 million;
- the full-year effective tax rate on reported earnings before income tax to be similar to 2019;
- depreciation and amortization of approximately $560 million;
- capital expenditures between $450 million and $475 million;
- debt reduction greater than $400 million; and
- continued share repurchases.

The Company's 2020 financial results forecasts do not include non-core, unusual, or non-recurring items. Accordingly, management is unable to reconcile projected full-year 2020 earnings excluding non-core, unusual, or non-recurring items to projected reported GAAP earnings without unreasonable efforts. These forecasts also do not include the possible impact on business and financial results of the recent coronavirus outbreak, including negative impact on overall business and market conditions; Eastman manufacturing sites and distribution, sales, and service facilities closure or reduced availability, including for employee health and safety; and Eastman products market demand weakness and supply chain disruption.

See "Risk Factors" below.

RISK FACTORS

In addition to factors described elsewhere in this Annual Report, the following are the most significant known factors, risks, and uncertainties that could cause actual results to differ materially from those in the forward-looking statements made in this Annual Report and elsewhere from time to time. See "Forward-Looking Statements".

Continued uncertain conditions in the global economy and the financial markets could negatively impact the Company.

The Company's business and operating results were affected by the impact of the last global recession, and its related impacts, such as the credit market crisis, declining consumer and business confidence, fluctuating commodity prices, volatile exchange rates, and other challenges that affected the global economy. Continued uncertainty in the global economy and global capital markets may adversely affect Eastman's results of operations, financial condition, and cash flows. In addition, the Company's ability to access the credit and capital markets under attractive rates and terms could be constrained, which may negatively impact the Company's liquidity or ability to pursue certain growth initiatives.

Volatility in costs for strategic raw material and energy commodities or disruption in the supply of these commodities could adversely affect the Company's financial results.

Eastman is reliant on certain strategic raw material and energy commodities for its operations and utilizes risk management tools, including hedging, as appropriate, to mitigate market fluctuations in raw material and energy costs. These risk mitigation measures do not eliminate all exposure to market fluctuations and may limit the Company from fully benefiting from lower raw material costs and, conversely, offset the impact of higher raw material costs. In addition, natural disasters, pandemic illness (including the recent coronavirus outbreak), plant interruptions, changes in laws or regulations, war or other outbreak of hostilities or terrorism, and breakdown or degradation of transportation infrastructure used for delivery of strategic raw material and energy commodities, could adversely impact both the cost and availability of these commodities.

Loss or financial weakness of any of the Company's largest customers could adversely affect the Company's financial results.

Although Eastman has an extensive customer base, loss of, or material financial weakness of, certain of the Company's largest customers could adversely affect the Company's financial condition and results of operations until such business is replaced. No assurances can be made that the Company would be able to regain or replace any lost customers.

The Company's business is subject to operating risks common to chemical manufacturing businesses, including cyber security risks, any of which could disrupt manufacturing operations or related infrastructure and adversely affect results of operations.

As a global specialty chemicals manufacturing company, Eastman's business is subject to operating risks common to chemical manufacturing, storage, handling, and transportation, including explosions, fires, inclement weather, natural disasters, mechanical failure, unscheduled downtime, transportation interruptions, remediation, chemical spills, discharges or releases of toxic or hazardous substances or gases. Significant limitation on the Company's ability to manufacture products due to disruption of manufacturing operations or related infrastructure could have a material adverse effect on the Company's sales revenue, costs, results of operations, credit ratings, and financial condition. Disruptions could occur due to internal factors such as computer or equipment malfunction (accidental or intentional), operator error, or process failures; or external factors such as computer or equipment malfunction at third-party service providers, natural disasters, pandemic illness (including the recent coronavirus outbreak), changes in laws or regulations, war or other outbreak of hostilities or terrorism, cyber attacks, or breakdown or degradation of transportation infrastructure used for delivery of supplies to the Company or for delivery of products to customers. The Company has in the past experienced cyber attacks and breaches of its computer information systems, although none of these have had a material adverse effect on the Company's operations. While the Company remains committed to managing cyber related risk, no assurances can be provided that any future disruptions due to these, or other, circumstances will not have a material effect on operations. Unplanned disruptions of manufacturing operations or related infrastructure could be significant in scale and could negatively impact operations, neighbors, and the environment, and could have a negative impact on the Company's results of operations. As previously reported, manufacturing operations and earnings have been negatively impacted by the fourth quarter 2017 operational incident in the Kingsport manufacturing facility coal gasification operations area and the second quarter 2018 third-party supplier operational disruptions at the Texas City and Longview, Texas manufacturing facilities.

Growth initiatives may not achieve desired business or financial objectives and may require significant resources in addition to or different from those available or in excess of those estimated or budgeted for such initiatives.

Eastman continues to identify and pursue growth opportunities through both organic and inorganic initiatives. These growth opportunities include development and commercialization or licensing of innovative new products and technologies and related employee leadership, expertise, skill development and retention, expansion into new markets and geographic regions, alliances, ventures, and acquisitions that complement and extend the Company's portfolio of businesses and capabilities. Such initiatives are necessarily constrained by available and development of additional resources, including development, attraction, and retention of employee leadership, application development, and sales and marketing talent and capabilities. There can be no assurance that such innovation, development and commercialization or licensing efforts, investments, or acquisitions and alliances (including integration of acquired businesses) will result in financially successful commercialization of products, or acceptance by existing or new customers, or successful entry into new markets or otherwise achieve their underlying strategic business objectives or that they will be beneficial to the Company's results of operations. There also can be no assurance that capital projects for growth efforts can be completed within the time or at the costs projected due, among other things, to demand for and availability of construction materials and labor and obtaining regulatory approvals and operating permits and reaching agreement on terms of key agreements and arrangements with potential suppliers and customers. Any such delays or cost overruns or the inability to obtain such approvals or to reach such agreements on acceptable terms could negatively affect the returns from any proposed or current investments and projects.

The Company's substantial global operations subject it to risks of doing business in other countries, including U.S. and non-U.S. trade relations, which could adversely affect its business, financial condition, and results of operations.

More than half of Eastman's sales for 2019 were to customers outside of North America. The Company expects sales from international markets to continue to represent a significant portion of its sales. Also, a significant portion of the Company's manufacturing capacity is located outside of the United States. Accordingly, the Company's business is subject to risks related to the differing legal, political, cultural, social and regulatory requirements, and economic conditions of many jurisdictions. Fluctuations in exchange rates may affect product demand and may adversely affect the profitability in U.S. dollars of products and services provided in foreign countries. In addition, the U.S. or foreign countries have imposed and may impose additional taxes or otherwise tax Eastman's foreign income, or adopt or increase restrictions on foreign trade or investment, including currency exchange controls, tariffs or other taxes, or limitations on imports or exports (including recent and proposed changes in U.S. trade policy and resulting retaliatory actions by other countries, including China, which have recently reduced and which may increasingly reduce demand for and increase costs of impacted products or result in U.S.-based trade counterparties limiting trade with U.S.-based companies or non-U.S. customers limiting their purchases from U.S.-based companies). Certain legal and political risks are also inherent in the operation of a company with Eastman's global scope. For example, it may be more difficult for Eastman to enforce its agreements or collect receivables through foreign legal systems, and the laws of some countries may not protect the Company's intellectual property rights to the same extent as the laws of the U.S. Failure of foreign countries to have laws to protect Eastman's intellectual property rights or an inability to effectively enforce such rights in foreign countries could result in loss of valuable proprietary information. There is also risk that foreign governments may nationalize private enterprises in certain countries where Eastman operates. Social and cultural norms in certain countries may not support compliance with Eastman's corporate policies including those that require compliance with substantive laws and regulations. Also, changes in general economic and political conditions (including the U.K. departure from the European Union, also known as "Brexit") in countries where Eastman operates are a risk to the Company's financial performance. As Eastman continues to operate its business globally, its success will depend, in part, on its ability to anticipate and effectively manage these and other related risks. There can be no assurance that the consequences of these and other factors relating to its multinational operations will not have an adverse effect on Eastman's business, financial condition, or results of operations.

Legislative, regulatory, or voluntary actions could increase the Company's future health, safety, and environmental compliance costs.

Eastman and its facilities and businesses are subject to complex health, safety, and environmental laws, regulations and related voluntary actions, both in the U.S. and internationally, which require and will continue to require significant expenditures to remain in compliance with such laws, regulations, and voluntary actions. The Company's accruals for such costs and associated liabilities are subject to changes in estimates on which the accruals are based. For example, any amount accrued for environmental matters reflects the Company's assumptions about remediation requirements at the contaminated site, the nature of the remedy, the outcome of discussions with regulatory agencies and other potentially responsible parties at multi-party sites, and the number of and financial viability of other potentially responsible parties. Changes in the estimates on which the accruals are based, unanticipated government enforcement action, or changes in health, safety, environmental, chemical control regulations and actions, and testing requirements could result in higher costs. Specifically, future changes in legislation and regulation and related voluntary actions associated with physical impacts of climate change may increase the likelihood that the Company's manufacturing facilities will in the future be impacted by carbon requirements, regulation of greenhouse gas emissions, and energy policy, and may result in capital expenditures, increases in costs for raw materials and energy, limitations on raw material and energy source and supply choices, and other direct compliance costs.

Significant acquisitions expose the Company to risks and uncertainties, the occurrence of any of which could materially adversely affect the Company's business, financial condition, and results of operations.

While acquisitions have been and continue to be a part of Eastman's growth strategy, acquisitions of large companies and businesses (such as the previous acquisitions of Taminco Corporation and Solutia, Inc.) subject the Company to a number of risks and uncertainties, the occurrence of any of which could have a material adverse effect on Eastman. These include, but are not limited to, the possibilities that the actual and projected future financial performance of the acquired business may be significantly worse than expected and that, as reported in "Critical Accounting Estimates - Impairment of Long-Lived Assets - Goodwill" in Part II, Item 7 of this Annual Report, the carrying values of certain assets from acquisitions may be impaired resulting in charges to future earnings; that significant additional indebtedness may constrain the Company's ability to access the credit and capital markets at attractive interest rates and favorable terms, which may negatively impact the Company's liquidity or ability to pursue certain growth initiatives; that the Company may not be able to achieve the cost, revenue, tax, or other "synergies" expected from any acquisition, or that there may be delays in achieving any such synergies; that management's time and effort may be dedicated to the new business resulting in a loss of focus on the successful operation of the Company's existing businesses; and that the Company may be required to expend significant additional resources in order to integrate any acquired business into Eastman or that the integration efforts will not achieve the expected benefits.

In addition to the foregoing most significant known risk factors to the Company, there may be other factors, not currently known to the Company, which could, in the future, materially adversely affect the Company, its business, financial condition, or results of operations. The foregoing discussion of the most significant risk factors to the Company does not necessarily present them in order of importance. This disclosure, including that under "Outlook" and other forward-looking statements and related disclosures made by the Company in this Annual Report and elsewhere from time to time, represents management's best judgment as of the date the information is given. The Company does not undertake responsibility for updating any of such information, whether as a result of new information, future events, or otherwise, except as required by law. Investors are advised, however, to consult any further public Company disclosures (such as in filings with the Securities and Exchange Commission or in Company press releases) on related subjects.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Eastman has exposure to various market risks principally due to changes in foreign currency exchange rates, the pricing of various commodities, and interest rates. In an effort to manage these risks, the Company employs various strategies, including pricing, inventory management, and hedging. The Company enters into derivative contracts which are governed by policies, procedures, and internal processes set forth by its Board of Directors.

The Company determines its exposures to market risk by utilizing sensitivity analyses, which measure the potential losses in fair value resulting from one or more selected hypothetical changes in foreign currency exchange rates, commodity prices, or interest rates.

Foreign Currency Risk

Due to a portion of the Company's operating cash flows and borrowings being denominated in foreign currencies, the Company is exposed to market risk from changes in foreign currency exchange rates. The Company continually evaluates its foreign currency exposure based on current market conditions and the locations in which the Company conducts business. The Company manages most foreign currency exposures on a consolidated basis, which allows the Company to net certain exposures and take advantage of natural offsets. To mitigate foreign currency risk, from time to time, the Company enters into derivative instruments to hedge the cash flows related to certain sales and purchase transactions expected within a rolling three year period and denominated in foreign currencies, and enters into forward exchange contracts to hedge certain firm commitments denominated in foreign currencies. The gains and losses on these contracts offset changes in the value of related exposures. Additionally, the Company, from time to time, enters into non-derivative and derivative instruments to hedge the foreign currency exposure of the net investment in certain foreign operations. The foreign currency change in the designated investment values of the foreign subsidiaries will generally be offset by a foreign currency change in the carrying value of the euro-denominated borrowings. It is the Company's policy to enter into foreign currency derivative and non-derivative instruments only to the extent considered necessary to meet its objectives as stated above. The Company does not enter into foreign currency derivative financial instruments for speculative purposes.

At December 31, 2019, the market risk associated with certain cash flows under these derivative transactions assuming a 10 percent adverse move in the U.S. dollar relative to these foreign currencies was $74 million, with an additional $7 million exposure for each additional one percentage point adverse change in those foreign currency rates. At December 31, 2018, the market risk associated with cash flows under these derivative transactions assuming a 10 percent adverse move in the U.S. dollar relative to those currencies was $28 million, with an additional $3 million exposure for each additional one percentage point adverse change in those exchange rates. Since the Company utilizes currency-sensitive derivative instruments for hedging anticipated foreign currency transactions, a loss in fair value from those instruments is generally offset by an increase in the value of the underlying anticipated transactions.

In January 2018, Eastman entered into fixed-to-fixed cross-currency swaps and designated these swaps to hedge a portion of its net investment in a euro functional currency denominated subsidiary against foreign currency fluctuations. These contracts involve the exchange of fixed U.S. dollars with fixed euro interest payments periodically over the life of the contracts and an exchange of the notional amounts at maturity. The fixed-to-fixed cross-currency swaps include €150 million ($180 million) maturing January 2021 and €266 million ($320 million) maturing August 2022.

In October 2018, Eastman entered into fixed-to-fixed cross-currency swaps and designated these swaps to hedge a portion of its net investment in a euro functional currency denominated subsidiary against foreign currency fluctuations. These contracts involve the exchange of fixed U.S. dollars with fixed euro interest payments periodically over the life of the contracts and an exchange of the notional amounts at maturity. The fixed-to-fixed cross-currency swaps include €165 million ($190 million) maturing January 2024, €104 million ($120 million) maturing March 2025, and €165 million ($190 million) maturing February 2027.

At December 31, 2019, a 10 percent fluctuation in the euro currency rate would have had a $235 million impact on the designated net investment values in the foreign subsidiaries. At December 31, 2018, a 10 percent fluctuation in the euro currency rate would have had a $240 million impact on the designated net investment values in the foreign subsidiaries. As a result of the designation of the euro-denominated borrowings and designated cross-currency interest rate swaps as hedges of the net investments, foreign currency translation gains and losses on the borrowings and designated cross-currency interest rate swaps are recorded as a component of the "Change in cumulative translation adjustment" within "Other comprehensive income (loss), net of tax" in the Consolidated Statements of Earnings, Comprehensive Income and Retained Earnings in Part II, Item 8 of this Annual Report. Therefore, a foreign currency change in the designated investment values of the foreign subsidiaries will generally be offset by a foreign currency change in the carrying value of the euro-denominated borrowings or the foreign currency change in the designated cross-currency interest rate swaps.

Commodity Risk

The Company is exposed to fluctuations in market prices for certain of its raw materials and energy, as well as contract sales of certain commodity products. To mitigate short-term fluctuations in market prices for certain commodities, principally propane, ethane, natural gas, paraxylene, ethylene, and benzene, as well as selling prices for ethylene, the Company enters into derivative transactions, from time to time, to hedge the cash flows related to certain sales and purchase transactions expected within a rolling three year period. At December 31, 2019 and December 31, 2018, the market risk associated with these derivative contracts, assuming an instantaneous parallel shift in the underlying commodity price of 10 percent and no corresponding change in the selling price of finished goods, was $9 million and $25 million, respectively, with an additional $1 million and $3 million of exposure at December 31, 2019 and December 31, 2018, respectively, for each one percentage point move in closing price thereafter.

Interest Rate Risk

Eastman is exposed to interest rate risk primarily as a result of its borrowing and investing activities, which include long-term borrowings used to maintain liquidity and to fund its business operations and capital requirements. The nature and amount of the Company's long-term and short-term debt may vary from time to time as a result of business requirements, market conditions, and other factors. The Company manages global interest rate exposure as part of regular operational and financing strategies. The Company had variable interest rate borrowings (including credit facility borrowings and commercial paper borrowings) of $171 million and $293 million at December 31, 2019 and 2018, respectively. These borrowings represented approximately 3 percent and 5 percent of total outstanding debt and bore weighted average interest rates of 2.03 percent and 2.53 percent at December 31, 2019 and 2018, respectively. A hypothetical 10 percent increase in the average interest rate applicable to these borrowings would have no material impact on the annualized interest expense as of December 31, 2019 and change annualized interest expense by approximately $1 million as of December 31, 2018.

Eastman may enter into interest rate swaps, collars, or similar instruments with the objective of reducing interest rate volatility relating to the Company's borrowing costs. As of both December 31, 2019 and 2018, the Company had an interest rate swap outstanding with a notional value of $75 million. For purposes of calculating the market risks associated with the fair value of interest-rate-sensitive instruments, the Company uses a hypothetical 10 percent increase in interest rates. The corresponding market risk of the interest rate swap hedging the interest rate risk on the 3.8% bonds maturing March 2025 was $1 million as of both December 31, 2019 and December 31, 2018.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL STATEMENTS

Management is responsible for the preparation and integrity of the accompanying consolidated financial statements of Eastman Chemical Company ("Eastman" or the "Company"). Eastman has prepared these consolidated financial statements in accordance with accounting principles generally accepted in the United States, and the statements of necessity include some amounts that are based on management's best estimates and judgments.

Eastman's accounting systems include extensive internal controls designed to provide reasonable assurance of the reliability of its financial records and the proper safeguarding and use of its assets. Such controls are based on established policies and procedures, are implemented by trained, skilled personnel with an appropriate segregation of duties, and are monitored through a comprehensive internal audit program. The Company's policies and procedures prescribe that the Company and all employees are to maintain the highest ethical standards and that its business practices throughout the world are to be conducted in a manner that is above reproach.

The accompanying consolidated financial statements have been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, who were responsible for conducting their audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Their report is included herein.

The Board of Directors exercises its responsibility for these financial statements through its Audit Committee, which consists entirely of non-management Board members. PricewaterhouseCoopers LLP, and internal auditors have full and free access to the Audit Committee. The Audit Committee meets periodically with PricewaterhouseCoopers LLP and Eastman's Director of Corporate Audit Services, both privately and with management present, to discuss accounting, auditing, policies and procedures, internal controls, and financial reporting matters.

/s/ Mark J. Costa	/s/ Curtis E. Espeland
Mark J. Costa	Curtis E. Espeland
Chief Executive Officer	Executive Vice President and
	Chief Financial Officer
February 26, 2020	February 26, 2020

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Eastman Chemical Company

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated statements of financial position of Eastman Chemical Company and its subsidiaries (the "Company") as of December 31, 2019 and 2018, and the related consolidated statements of earnings, comprehensive income and retained earnings and of cash flows for each of the three years in the period ended December 31, 2019, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Changes in Accounting Principles

As discussed in Note 1 to the consolidated financial statements, the Company changed the manner in which it accounts for leases in 2019 and the manner in which accounts for revenues from contracts with customers in 2018.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Goodwill Impairment Assessment - Crop Protection Reporting Unit

As described in Note 4 to the consolidated financial statements, the Company's consolidated goodwill balance was $4.4 billion as of December 31, 2019. The Company conducts testing of goodwill annually in the fourth quarter or more frequently when events and circumstances indicate an impairment may have occurred. A reporting unit's goodwill is considered to be impaired when the reporting unit's estimated fair value is less than its carrying value. The Company uses an income approach and applies a discounted cash flow model in testing the carrying value of goodwill for each reporting unit. Key assumptions and estimates used in the Company's goodwill impairment testing included projections of revenues and earnings before interest and income taxes ("EBIT") determined using the Company's annual multi-year strategic plan, the estimated weighted average cost of capital ("WACC"), and a projected long-term growth rate. As a result of the goodwill impairment testing performed during fourth quarter 2019, fair values were determined to exceed the carrying values for each reporting unit tested with the exception of crop protection (part of the Additives & Functional Products ("AFP") operating segment). The Company recognized a goodwill impairment of $45 million in the crop protection reporting unit. The impairment was primarily due to the impact of recent regulatory changes in the European Union on current period and forecasted revenue and EBIT and a decrease in the long-term growth rate. The crop protection reporting unit's goodwill after the reduction for impairment was $190 million as of December 31, 2019.

The principal considerations for our determination that performing procedures relating to the goodwill impairment assessment of the crop protection reporting unit is a critical audit matter are there was significant judgment by management when developing the fair value measurement of the reporting unit. This in turn led to a high degree of auditor judgment, subjectivity and effort in performing procedures and in evaluating the audit evidence supporting management's significant assumptions, including projections of revenue and EBIT determined using the Company's annual multi-year strategic plan, the estimated WACC, and the projected long-term growth rate. In addition, the audit effort involved the use of professionals with specialized skill and knowledge to assist in performing these procedures and evaluating the audit evidence obtained.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's goodwill impairment assessment, including controls over the valuation of the Company's reporting units. These procedures also included, among others (i) testing management's process for developing the fair value estimate of the crop protection reporting unit, (ii) evaluating the appropriateness of the discounted cash flow model, (iii) testing the completeness, accuracy and relevance of underlying data used in the model, and (iv) evaluating the significant assumptions used by management, including projections of revenue and EBIT determined using the Company's annual multi-year strategic plan, the estimated WACC, and the projected long-term growth rate. Evaluating management's assumptions related the impact of recent regulatory changes in the European Union on current period and forecasted revenue and EBIT and the long-term growth rate involved evaluating (i) the current and past performance of the reporting unit, (ii) the consistency with external industry reports, and (iii) whether these assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in the evaluation of the Company's discounted cash flow model, including the evaluation of the WACC.

/s/ PricewaterhouseCoopers LLP
Cincinnati, OH
February 26, 2020
We have served as the Company's auditor since 1993.

EASTMAN

CONSOLIDATED STATEMENTS OF EARNINGS, COMPREHENSIVE INCOME AND RETAINED EARNINGS

(Dollars in millions, except per share amounts)	For years ended December 31, 2019	2018	2017
Sales	$ 9,273	$ 10,151	$ 9,549
Cost of sales	7,039	7,672	7,186
Gross profit	2,234	2,479	2,363
Selling, general and administrative expenses	691	721	729
Research and development expenses	234	235	227
Asset impairments and restructuring charges, net	126	45	8
Other components of post-employment (benefit) cost, net	60	(21)	(135)
Other (income) charges, net	3	(53)	4
Earnings before interest and taxes	1,120	1,552	1,530
Net interest expense	218	235	241
Early debt extinguishment and other related costs	—	7	—
Earnings before income taxes	902	1,310	1,289
Provision for (benefit from) income taxes	140	226	(99)
Net earnings	762	1,084	1,388
Less: Net earnings attributable to noncontrolling interest	3	4	4
Net earnings attributable to Eastman	$ 759	$ 1,080	$ 1,384
Basic earnings per share attributable to Eastman	$ 5.52	$ 7.65	$ 9.56
Diluted earnings per share attributable to Eastman	$ 5.48	$ 7.56	$ 9.47
Comprehensive Income			
Net earnings including noncontrolling interest	$ 762	$ 1,084	$ 1,388
Other comprehensive income (loss), net of tax:			
Change in cumulative translation adjustment	45	(13)	85
Defined benefit pension and other postretirement benefit plans:			
Amortization of unrecognized prior service credits included in net periodic costs	(29)	(30)	(27)
Derivatives and hedging:			
Unrealized gain (loss) during period	(20)	22	7
Reclassification adjustment for (gains) losses included in net income, net	15	(15)	7
Total other comprehensive income (loss), net of tax	11	(36)	72
Comprehensive income including noncontrolling interest	773	1,048	1,460
Less: Comprehensive income attributable to noncontrolling interest	3	4	4
Comprehensive income attributable to Eastman	$ 770	$ 1,044	$ 1,456
Retained Earnings			
Retained earnings at beginning of period	$ 7,573	$ 6,802	$ 5,721
Cumulative effect adjustment resulting from adoption of new accounting standards	(20)	16	—
Net earnings attributable to Eastman	759	1,080	1,384
Cash dividends declared	(347)	(325)	(303)
Retained earnings at end of period	$ 7,965	$ 7,573	$ 6,802

The accompanying notes are an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

(Dollars in millions, except per share amounts)	December 31, 2019	December 31, 2018
Assets		
Current assets		
Cash and cash equivalents	$ 204	$ 226
Trade receivables, net of allowance for doubtful accounts	980	1,154
Miscellaneous receivables	395	329
Inventories	1,662	1,583
Other current assets	80	73
Total current assets	3,321	3,365
Properties		
Properties and equipment at cost	12,904	12,731
Less: Accumulated depreciation	7,333	7,131
Net properties	5,571	5,600
Goodwill	4,431	4,467
Intangible assets, net of accumulated amortization	2,011	2,185
Other noncurrent assets	674	378
Total assets	$ 16,008	$ 15,995
Liabilities and Stockholders' Equity		
Current liabilities		
Payables and other current liabilities	$ 1,618	$ 1,608
Borrowings due within one year	171	243
Total current liabilities	1,789	1,851
Long-term borrowings	5,611	5,925
Deferred income tax liabilities	915	884
Post-employment obligations	1,016	925
Other long-term liabilities	645	532
Total liabilities	9,976	10,117
Commitments and contingencies (Note 11)		
Stockholders' equity		
Common stock ($0.01 par value per share – 350,000,000 shares authorized; shares issued – 219,638,646 and 219,140,523 for 2019 and 2018, respectively)	2	2
Additional paid-in capital	2,105	2,048
Retained earnings	7,965	7,573
Accumulated other comprehensive loss	(214)	(245)
	9,858	9,378
Less: Treasury stock at cost (83,696,398 shares for 2019 and 79,413,989 shares for 2018)	3,900	3,575
Total Eastman stockholders' equity	5,958	5,803
Noncontrolling interest	74	75
Total equity	6,032	5,878
Total liabilities and stockholders' equity	$ 16,008	$ 15,995

The accompanying notes are an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(Dollars in millions)	For years ended December 31, 2019	2018	2017
Operating activities			
Net earnings	$ 762	$ 1,084	$ 1,388
Adjustments to reconcile net earnings to net cash provided by operating activities:			
Depreciation and amortization	611	604	587
Mark-to-market pension and other postretirement benefit plans (gain) loss, net	143	99	(21)
Asset impairment charges	72	39	1
Early debt extinguishment and other related costs	—	7	—
Gains from sale of assets and businesses	—	(4)	(3)
Gain from property insurance	—	(65)	—
Provision for (benefit from) deferred income taxes	23	(51)	(394)
Changes in operating assets and liabilities, net of effect of acquisitions and divestitures:			
(Increase) decrease in trade receivables	170	16	(53)
(Increase) decrease in inventories	(80)	(224)	(71)
Increase (decrease) in trade payables	(27)	90	123
Pension and other postretirement contributions (in excess of) less than expenses	(119)	(152)	(115)
Variable compensation (in excess of) less than expenses	38	55	71
Other items, net	(89)	45	144
Net cash provided by operating activities	1,504	1,543	1,657
Investing activities			
Additions to properties and equipment	(425)	(528)	(649)
Proceeds from property insurance	—	65	—
Proceeds from sale of assets and businesses	—	5	14
Acquisitions, net of cash acquired	(48)	(3)	(4)
Other items, net	(7)	(2)	(4)
Net cash used in investing activities	(480)	(463)	(643)
Financing activities			
Net increase (decrease) in commercial paper and other borrowings	(70)	(146)	(19)
Proceeds from borrowings	460	1,604	675
Repayment of borrowings	(760)	(1,774)	(1,025)
Dividends paid to stockholders	(343)	(318)	(296)
Treasury stock purchases	(325)	(400)	(350)
Other items, net	(5)	(6)	9
Net cash used in financing activities	(1,043)	(1,040)	(1,006)
Effect of exchange rate changes on cash and cash equivalents	(3)	(5)	2
Net change in cash and cash equivalents	(22)	35	10
Cash and cash equivalents at beginning of period	226	191	181
Cash and cash equivalents at end of period	$ 204	$ 226	$ 191

The accompanying notes are an integral part of these consolidated financial statements.

1. SIGNIFICANT ACCOUNTING POLICIES

Financial Statement Presentation

The consolidated financial statements of Eastman Chemical Company ("Eastman" or the "Company") and subsidiaries are prepared in conformity with accounting principles generally accepted ("GAAP") in the United States and of necessity include some amounts that are based upon management estimates and judgments. Future actual results could differ from such current estimates. The consolidated financial statements include assets, liabilities, sales revenue, and expenses of all majority-owned subsidiaries and joint ventures in which a controlling interest is maintained. Eastman accounts for other joint ventures and investments in minority-owned companies where it exercises significant influence on the equity basis. Intercompany transactions and balances are eliminated in consolidation. Certain prior period data has been reclassified in the consolidated financial statements and accompanying footnotes to conform to current period presentation.

Recently Adopted Accounting Standards

Accounting Standards Update ("ASU") 2016-02 Leases: On January 1, 2019, Eastman adopted this standard, and related releases, under the modified retrospective optional transition method such that prior period financial statements have not been adjusted to reflect the impact of the new standard and adoption did not result in an impact to retained earnings. Upon adoption, operating right-to-use assets and lease liabilities were $219 million. The new standard establishes two types of leases: finance and operating. Both finance and operating leases have associated right-to-use assets and lease liabilities that have been valued at the present value of the lease payments and recognized on the Consolidated Statement of Financial Position. For further information, see Note 11, "Leases and Other Commitments".

ASU 2018-02 Income Statement - Reporting Comprehensive Income: On January 1, 2019, Eastman adopted this standard in the current period resulting in the reclassification of $20 million of stranded tax expense from accumulated other comprehensive income (loss) ("AOCI") to retained earnings as a result of the 2017 Tax Cuts and Jobs Act ("Tax Reform Act"). The amount of the reclassification is the effect of the change in the U.S. federal corporate income tax rate on the gross deferred tax amounts and related valuation allowances related to items remaining in AOCI.

ASU 2018-15 Internal-Use Software - Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract: On January 1, 2019, Eastman adopted this standard prospectively which did not result in a material impact on the Company's financial statements and related disclosures.

ASU 2018-16 Derivatives and Hedging - Inclusion of the Secured Overnight Financing Rate ("SOFR") Overnight Index Swap ("OIS") Rate as a Benchmark Interest Rate for Hedge Accounting Purposes: On January 1, 2019, Eastman adopted this standard prospectively for qualifying new or redesignated hedging relationships. Management does not expect the adoption of this standard will materially impact the Company's financial statements and related disclosures.

Accounting Standards Issued But Not Adopted as of December 31, 2019

ASU 2016-13 Financial Instruments - Credit Losses: In June 2016, the Financial Accounting Standards Board ("FASB") issued this standard relating to credit losses and subsequent related releases. The amendments require a financial asset (including trade receivables) to be presented at the net amount expected to be collected through the use of allowances for credit losses valuation account. The income statement will reflect the measurement of credit losses for newly recognized financial assets, as well as the expected increases or decreases of expected credit losses that have taken place during the period. This standard is effective for annual reporting periods beginning after December 15, 2019. The new standard application is mixed among the various elements that include modified retrospective and prospective transition methods. Management does not expect that changes in its accounting required by the new standard will materially impact the Company's financial statements and related disclosures.

ASU 2018-13 Fair Value Measurement - Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement: In August 2018, the FASB issued this update as a part of its disclosure framework project to improve the effectiveness of disclosures in the notes to financial statements. The primary changes applicable to Eastman in this update are the disclosures of fair value levels, assessment thereof, and transfers between those levels. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. Certain disclosure amendments are to be applied prospectively for only the most recent interim or annual period presented, while other amendments are to be applied retrospectively to all periods presented. Management does not expect that changes required by the new standard will materially impact the Company's related disclosures.

ASU 2018-14 Retirement Benefits - Disclosure Framework - Changes to the Disclosure Requirements for Defined Benefit Plans: In August 2018, the FASB issued this update as a part of its disclosure framework project to improve the effectiveness of disclosures in the notes to financial statements. The primary change impacting Eastman is the addition of disclosures related to significant gains and losses related to changes in the benefit obligation for the period and weighted-average interest crediting rates for cash balance plans. This standard is effective for fiscal years ending after December 15, 2020 and early adoption is permitted. Upon adoption, this update is to be applied on a retrospective basis to all periods presented. Management does not expect that changes required by the new standard will materially impact the Company's related disclosures.

ASU 2018-18 Collaborative Arrangements - Clarifying the Interaction between Topic 808 (Collaborative Arrangements) and Topic 606 (Revenue from Contracts with Customers): In November 2018, the FASB issued clarification in regards to which contracts are accounted for under Topic 808 and Topic 606 as well as alignment of guidance between the two pronouncements. This standard is effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. Upon adoption, this update is to be applied retrospectively to the date of initial application of Topic 606. Management is currently evaluating the impact on the Company's financial statements and related disclosures.

ASU 2019-01 Leases - Codification Improvements: In March 2019, the FASB issued this update in response to stakeholder inquiries regarding the new leasing standard. This standard is effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. Upon adoption, this update is to be applied as of the adoption date and under the same transition methodology of *ASU 2016-02 Leases*. Management is currently evaluating the impact on the Company's financial statements and related disclosures.

ASU 2019-12 Income Taxes - Simplifying the Accounting for Income Taxes: In December 2019, the FASB issued this update as part of its initiative to reduce complexity in accounting standards which removes certain exceptions and provides simplification to specific tax items. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020. Early adoption is permitted, including adoption in any interim period for which financial statements have not yet been issued. Adoption methods vary based on the specific items impacted. Management is currently evaluating the impact on the Company's financial statements and related disclosures.

Revenue Recognition

On January 1, 2018, Eastman adopted *ASU 2014-09 Revenue Recognition (ASC 606)* under the modified retrospective method, such that revenue for all periods prior to January 1, 2018 continue to be reported under the previous standard, which resulted in an increase to retained earnings of $53 million after tax for products shipped but not delivered as of December 31, 2017.

Eastman recognizes revenue when performance obligations of the sale are satisfied. Eastman sells to customers through master sales agreements or standalone purchase orders. The majority of the Company's terms of sale have a single performance obligation to transfer products. Accordingly, the Company recognizes revenue when control has been transferred to the customer, generally at the time of shipment of products.

Eastman accounts for shipping and handling as activities to fulfill the promise to transfer the good and does not allocate revenue to those activities. All related shipping and handling costs are recognized at the time of shipment. Amounts collected for sales or other similar taxes are presented net of the related tax expense rather than presenting them as additional revenue. The incremental cost of obtaining a sales contract is recognized as a selling expense when incurred given the potential amortization period for such an asset is one year or less. The possible existence of a significant financing component within a sales contract is ignored when the time between cash collection and performance is less than one year. Finally, the Company does not disclose any unfulfilled obligations as customer purchase order commitments have an original expected duration of one year or less and no consideration from customers is excluded from the transaction price.

The timing of Eastman's customer billings does not always match the timing of revenue recognition. When the Company is entitled to bill a customer in advance of the recognition of revenue, a contract liability is recognized. When the Company is not entitled to bill a customer until a period after the related recognition of revenue, a contract asset is recognized. Contract assets represent the Company's right to consideration for the exchange of goods under a contract, but which are not yet billable to a customer for consignment inventory or pursuant to certain shipping terms. Contract liabilities were not material as of December 31, 2019 or December 31, 2018. Contract assets were $65 million and $62 million as of December 31, 2019 and December 31, 2018, respectively, and are included as a component of "Miscellaneous receivables" in the Consolidated Statements of Financial Position.

For additional information, see Note 19, "Segment and Regional Sales Information".

Pension and Other Postretirement Benefits

Eastman maintains defined benefit pension plans that provide eligible employees with retirement benefits. Under its other postretirement benefit plans in the U.S., Eastman provides life insurance for eligible retirees hired prior to January 1, 2007. Eastman provides a subsidy for pre-Medicare health care and dental benefits to eligible retirees hired prior to January 1, 2007 that will end on December 31, 2021. Company funding is also provided for eligible Medicare retirees hired prior to January 1, 2007 with a health reimbursement arrangement. The estimated amounts of the costs and obligations related to these benefits reflect the Company's assumptions related to discount rates, expected return on plan assets, rate of compensation increase or decrease for employees, and health care cost trends. The estimated cost of providing plan benefits also depends on demographic assumptions including retirements, mortality, turnover, and plan participation.

Eastman's pension and other postretirement benefit plans costs consist of two elements: 1) ongoing costs recognized quarterly, which are comprised of service and interest costs, expected returns on plan assets, and amortization of prior service credits; and 2) mark-to-market ("MTM") gains and losses recognized annually, in the fourth quarter of each year, primarily resulting from changes in actuarial assumptions for discount rates and the differences between actual and expected returns on plan assets. Any interim remeasurements triggered by a curtailment, settlement, or significant plan changes are recognized in the quarter in which such remeasurement event occurs.

For additional information, see Note 10, "Retirement Plans".

Environmental Costs

Eastman recognizes environmental remediation costs when it is probable that the Company has incurred a liability at a contaminated site and the amount can be reasonably estimated. When a single amount cannot be reasonably estimated but the cost can be estimated within a range, the Company recognizes the minimum undiscounted amount. This undiscounted amount reflects liabilities expected to be paid within approximately 30 years and the Company's assumptions about remediation requirements at the contaminated site, the nature of the remedy, the outcome of discussions with regulatory agencies and other potentially responsible parties at multi-party sites, and the number and financial viability of other potentially responsible parties. Changes in the estimates on which the accruals are based, unanticipated government enforcement action, or changes in health, safety, environmental, and chemical control regulations and testing requirements could result in higher or lower costs.

The Company also establishes reserves for closure and post-closure costs associated with the environmental and other assets it maintains. Environmental assets include but are not limited to waste management units, such as landfills, water treatment facilities, and surface impoundments. When these types of assets are constructed or installed, a loss contingency reserve is established for the anticipated future costs associated with the retirement or closure of the asset based on its expected life and the applicable regulatory closure requirements. The Company recognizes the asset retirement obligations in the period in which they are incurred if a reasonable estimate of fair value can be made. The asset retirement obligations are discounted to expected present value and subsequently adjusted for changes in fair value. These future estimated costs are charged to earnings over the estimated useful life of the assets. If the Company changes its estimate of the environmental asset retirement obligation costs or its estimate of the useful lives of these assets, expenses charged to earnings will be impacted.

The current portion of accruals for environmental liabilities is included in payables and other current liabilities and the long-term portion is included in other long-term liabilities. These accruals exclude claims for recoveries from insurance companies or other third parties. Environmental costs are capitalized if they extend the life of the related property, increase its capacity, or mitigate or prevent future contamination. The cost of operating and maintaining environmental control facilities is charged to expense as incurred.

For additional information see Note 12, "Environmental Matters and Asset Retirement Obligations".

Share-based Compensation

Eastman recognizes compensation expense in the financial statements for stock options and other share-based compensation awards based upon the grant-date fair value over the substantive vesting period. For additional information, see Note 17, "Share-Based Compensation Plans and Awards".

Restructuring of Operations

Eastman records restructuring charges for costs incurred in connection with consolidation of operations, exited business or product lines, or shutdowns of specific sites that are expected to be substantially completed within twelve months. These restructuring charges are recorded as incurred, and are associated with site closures, legal and environmental matters, demolition, contract terminations, obsolete inventory, or other costs and charges directly related to the restructuring. The Company records severance charges for employee separations when the separation is probable and reasonably estimable. In the event employees are required to perform future service, the Company records severance charges ratably over the remaining service period of those employees. For additional information, see Note 15, "Asset Impairments and Restructuring Charges, Net".

Income Taxes

The provision for (benefit from) income taxes has been determined using the asset and liability approach of accounting for income taxes. Under this approach, deferred taxes represent the future tax consequences expected to occur when the reported amounts of assets and liabilities are recovered or paid. The provision for (benefit from) income taxes represents income taxes paid or payable for the current year plus the change in deferred taxes during the year. Deferred taxes result from differences between the financial and tax bases of Eastman's assets and liabilities and are adjusted for changes in tax rates and tax laws when changes are enacted. Valuation allowances are recorded to reduce deferred tax assets when it is more likely than not that a tax benefit will not be realized. Provision has been made for income taxes on unremitted earnings of subsidiaries and affiliates, except for subsidiaries in which earnings are deemed to be indefinitely reinvested.

The Company recognizes income tax positions that meet the more likely than not threshold and accrues interest related to unrecognized income tax positions which is recorded as a component of the income tax provision.

In conjunction with its evaluation of the provisions of the Tax Reform Act, in 2018, the Company made an accounting policy election to account for taxes resulting from the global intangible low-tax income ("GILTI") as a component of the provision for income taxes.

Cash and Cash Equivalents

Cash and cash equivalents include cash, time deposits, and readily marketable securities with original maturities of three months or less.

Fair Value Measurements

Eastman records recurring and non-recurring financial assets and liabilities as well as all non-financial assets and liabilities subject to fair value measurement at the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. These fair value principles prioritize valuation inputs across three broad levels. Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities. Level 2 inputs are quoted prices for similar assets and liabilities in active markets or inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the financial instrument. Level 3 inputs are unobservable inputs based on the Company's assumptions used to measure assets and liabilities at fair value. An asset or liability's classification within the various levels is determined based on the lowest level input that is significant to the fair value measurement.

Accounts Receivable and Allowance for Doubtful Accounts

Trade accounts receivable are recorded at the invoiced amount and do not bear interest. Eastman maintains allowances for doubtful accounts for estimated losses resulting from the inability of its customers to make required payments. The Company calculates the allowance based on an assessment of the risk in the accounts receivable portfolio. Write-offs are recorded at the time a customer receivable is deemed uncollectible. Allowance for doubtful accounts was $11 million at both December 31, 2019 and 2018. The Company does not enter into receivables of a long-term nature, also known as financing receivables, in the normal course of business.

Inventories

Inventories measured by the last-in, first-out ("LIFO") method are valued at the lower of cost or market and inventories measured by the first-in, first-out ("FIFO") method are valued at lower cost or net realizable value. Eastman determines the cost of most raw materials, work in process, and finished goods inventories in the United States and Switzerland by the LIFO method. The cost of all other inventories is determined by the average cost method, which approximates the FIFO method. The Company writes-down its inventories equal to the difference between the carrying value of inventory and the estimated market value or net realizable value based upon assumptions about future demand and market conditions.

Properties

Eastman records properties at cost. Maintenance and repairs are charged to earnings; replacements and betterments are capitalized. When Eastman retires or otherwise disposes of assets, it removes the cost of such assets and related accumulated depreciation from the accounts. The Company records any profit or loss on retirement or other disposition into earnings. Asset impairments are reflected as increases in accumulated depreciation for properties that have been placed in service. In instances when an asset has not been placed in service and is impaired, the associated costs are removed from the appropriate property accounts.

Depreciation and Amortization

Depreciation expense is calculated based on historical cost and the estimated useful lives of the assets, generally using the straight-line method. Estimated useful lives for buildings and building equipment generally range from 20 to 50 years. Estimated useful lives generally ranging from 3 to 33 years are applied to machinery and equipment in the following categories: computer software (3 to 5 years); office furniture and fixtures and computer equipment (5 to 10 years); vehicles, railcars, and general machinery and equipment (5 to 20 years); and manufacturing-related improvements (20 to 33 years). Accelerated depreciation is reported when the estimated useful life is shortened and continues to be reported in cost of sales.

Amortization expense for definite-lived intangible assets is generally determined using a straight-line method over the estimated useful life of the asset. Amortization expense is reported in cost of sales.

For additional information, see Note 4, "Goodwill and Other Intangible Assets".

Impairment of Long-Lived Assets

Definite-lived Assets

Properties and equipment and definite-lived intangible assets to be held and used by Eastman are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review of properties and equipment and the review of definite-lived intangible assets is performed at the asset group level, which is the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. If the carrying amount is not considered to be recoverable, an analysis of fair value is triggered. An impairment is recognized for the excess of the carrying amount of the asset over the fair value. Fair value is the price that would be received to sell an asset in an orderly transaction between market participants.

Goodwill

Eastman conducts testing of goodwill annually in the fourth quarter or more frequently when events and circumstances indicate an impairment may have occurred. The testing of goodwill is performed at the "reporting unit" level which the Company has determined to be its "components". Components are defined as an operating segment or one level below an operating segment, and in order to be a reporting unit, the component must 1) be a "business" as defined by applicable accounting standards (an integrated set of activities and assets that is capable of being conducted and managed for the purpose of providing a return in the form of dividends, lower costs, or other economic benefits directly to the investors or other owners, members, or participants); 2) have discrete financial information available; and 3) be reviewed regularly by Company operating segment management. The Company aggregates certain components into reporting units based on economic similarities.

A reporting unit's goodwill is considered to be impaired when the reporting unit's estimated fair value is less than its carrying value. The Company uses an income approach and applies a discounted cash flow model in testing the carrying value of goodwill for each reporting unit. Key assumptions and estimates used in the Company's 2019 goodwill impairment testing included projections of revenues and earnings before interest and taxes ("EBIT") determined using the Company's annual multi-year strategic plan, the estimated weighted average cost of capital ("WACC") and a projected long-term growth rate. The Company believes these assumptions are consistent with those a hypothetical market participant would use given circumstances that were present at the time the estimates were made. However, actual results and amounts may be significantly different from the Company's estimates. In addition, the use of different estimates or assumptions could result in materially different estimated fair values of reporting units. The WACC is calculated incorporating weighted average returns on debt and equity from market participants. Therefore, changes in the market, which are beyond the control of the Company, may have an impact on future calculations of estimated fair value.

Indefinite-lived Intangible Assets

Eastman conducts testing of indefinite-lived intangible assets annually in the fourth quarter or more frequently when events and circumstances indicate an impairment may have occurred. The carrying value of an indefinite-lived intangible asset is considered to be impaired when the fair value, as established by appraisal or based on discounted future cash flows of certain related products, is less than the respective carrying value.

Indefinite-lived intangible assets, consisting primarily of various tradenames, are tested for potential impairment by comparing the estimated fair value to the carrying amount. The Company uses an income approach, specifically the relief from royalty method, to test indefinite-lived intangible assets. The estimated fair value of tradenames is determined based on an assumed royalty rate savings, discounted by the calculated market participant WACC plus a risk premium.

For additional information, see Note 4, "Goodwill and Other Intangible Assets".

Leases

As noted above, On January 1, 2019, Eastman adopted *ASU 2016-02 Leases.* For accounting policy and elections, see Note 11, "Leases and Other Commitments".

Investments

The consolidated financial statements include the accounts of Eastman and all its subsidiaries and entities or joint ventures in which a controlling interest is maintained. The Company includes its share of earnings and losses of such investments in "Net earnings attributable to Eastman" and "Comprehensive income attributable to Eastman" located in the Consolidated Statements of Earnings, Comprehensive Income and Retained Earnings and in "Total equity" located in the Consolidated Statements of Financial Position.

Investments in affiliates over which the Company has significant influence but not a controlling interest are carried on the equity basis. Under the equity method of accounting, these investments are included in "Other noncurrent assets" in the Consolidated Statements of Financial Position. The Company includes its share of earnings and losses of such investments in "Other (income) charges, net" located in the Consolidated Statements of Earnings, Comprehensive Income and Retained Earnings.

Derivative and Non-Derivative Financial Instruments

Eastman uses derivative and non-derivative instruments to manage its exposure to market risks, such as changes in foreign currency exchange rates, commodity prices, and interest rates. The Company does not enter into derivative transactions for speculative purposes.

Counterparties to the derivative contracts are highly rated financial institutions which the Company believes carry minimal risk of nonperformance and the Company diversifies its positions among such counterparties to reduce its exposure to counterparty risk and credit losses. The Company monitors the creditworthiness of its counterparties on an ongoing basis.

The Company's derivative instruments are recognized as either assets or liabilities on the Consolidated Statements of Financial Position and measured at fair value. For qualifying derivatives designated as cash flow hedges, the effective portion of the changes in the fair value are reported as a component of AOCI in the Consolidated Statements of Financial Position and recognized in earnings when the hedged items affect earnings. For qualifying derivatives designated as fair value hedges, the effective portion of the changes in the fair value are reported as "Long-term borrowings" on the Consolidated Statements of Financial Position and recognized in earnings when the hedged items affect earnings. For qualifying derivative or non-derivative instruments designated as net investment hedges, the net change in the hedge instrument and item being hedged is reported as a component of "Cumulative translation adjustment" ("CTA") within AOCI located in the Consolidated Statements of Earnings, Comprehensive Income and Retained Earnings. Any hedge components excluded from the assessment of effectiveness are recognized in earnings, the initial value of the excluded component, using a systematic and rational method over the life of the hedging instrument. Changes in the fair value of nonqualifying derivatives or derivatives that are not designated as hedges, are recognized in current earnings. Hedge accounting will be discontinued prospectively for all hedges that no longer qualify for hedge accounting treatment. Cash flows from derivative instruments designated as hedges are reported in the same category as the cash flows from the items being hedged.

For additional information, see Note 9, "Derivative and Non-Derivative Financial Instruments".

Litigation and Contingent Liabilities

Eastman and its operations from time to time are, and in the future may be, parties to or targets of lawsuits, claims, investigations and proceedings, including product liability, personal injury, asbestos, patent and intellectual property, commercial, contract, environmental, antitrust, health and safety, and employment matters, which are handled and defended in the ordinary course of business. The Company accrues a contingent loss liability for such matters when it is probable that a liability has been incurred and the amount can be reasonably estimated. When a single amount cannot be reasonably estimated but the cost can be estimated within a range, the Company accrues the minimum amount. The Company expenses legal costs, including those expected to be incurred in connection with a loss contingency, as incurred.

Working Capital Management and Off Balance Sheet Arrangements

The Company works with suppliers to optimize payment terms and conditions on accounts payable to enhance timing of working capital and cash flows. As part of these efforts, in 2019, the Company introduced a voluntary supply chain finance program to provide suppliers with the opportunity to sell receivables due from Eastman to a participating financial institution. Eastman's responsibility is limited to making payments on the terms originally negotiated with suppliers, regardless of whether the suppliers sells their receivables to the financial institution. The range of payment terms Eastman negotiates with suppliers are consistent, regardless of whether a supplier participates in the program. All of Eastman's accounts payable and associated payments are reported consistently in the Company's Consolidated Statements of Financial Position and Consolidated Statements of Cash Flows regardless of whether they are associated with a vendor who participates in the program.

In 2019, the Company expanded off balance sheet, uncommitted accounts receivable factoring agreements under which entire invoices may be sold, without recourse, to third-party financial institutions. Under these agreements, the Company sells the invoices at face value, less a transaction fee, which substantially equals the carrying value and fair value with no gain or loss recognized and no credit loss exposure is retained. Available capacity under these agreements, which the Company uses as a source of working capital funding, is dependent on the level of accounts receivable eligible to be sold and the financial institutions' willingness to purchase such receivables. In addition, certain agreements also require that the Company continue to service, administer, and collect the sold accounts receivable at market rates. The total amount of receivables sold in 2019 and 2018 were $857 million and $219 million, respectively, representing less than full capacity due to implementation of new agreements across periods.

2. INVENTORIES

(Dollars in millions)	December 31, 2019	December 31, 2018
Finished goods	$ 1,114	$ 1,143
Work in process	220	262
Raw materials and supplies	576	515
Total inventories at FIFO or average cost	1,910	1,920
Less: LIFO reserve	248	337
Total inventories	$ 1,662	$ 1,583

Inventories valued on the LIFO method were approximately 50 percent and 55 percent of total inventories at December 31, 2019 and December 31, 2018, respectively.

3. PROPERTIES AND ACCUMULATED DEPRECIATION

(Dollars in millions)	December 31, 2019	December 31, 2018
Properties		
Land	$ 158	$ 158
Buildings	1,430	1,385
Machinery and equipment	10,960	10,801
Construction in progress	356	387
Properties and equipment at cost	$ 12,904	$ 12,731
Less: Accumulated depreciation	7,333	7,131
Net properties	$ 5,571	$ 5,600

Depreciation expense was $450 million, $437 million, and $420 million for 2019, 2018, and 2017, respectively.

Cumulative construction-period interest of $98 million and $115 million, reduced by accumulated depreciation of $38 million and $54 million, is included in net properties at December 31, 2019 and 2018, respectively.

Eastman capitalized $4 million of interest in 2019, $4 million of interest in 2018, and $8 million of interest in 2017.

4. GOODWILL AND OTHER INTANGIBLE ASSETS

Changes in the carrying amount of goodwill follow:

(Dollars in millions)	Additives & Functional Products	Advanced Materials	Chemical Intermediates	Other	Total
Balance at December 31, 2017	$ 2,459	$ 1,289	$ 769	$ 10	$ 4,527
Impairments recognized	(38)	—	—	—	(38)
Currency translation adjustments	(11)	(6)	(5)	—	(22)
Balance at December 31, 2018	2,410	1,283	764	10	4,467
Acquisitions	15	—	—	—	15
Impairments recognized	(45)	—	—	—	(45)
Currency translation adjustments	(3)	(1)	(2)	—	(6)
Balance at December 31, 2019	$ 2,377	$ 1,282	$ 762	$ 10	$ 4,431

Eastman conducts testing of goodwill annually in the fourth quarter or more frequently when events and circumstances indicate an impairment may have occurred. A reporting unit's goodwill is considered to be impaired when the reporting unit's estimated fair value is less than its carrying value. The Company uses an income approach and applies a discounted cash flow model in testing the carrying value of goodwill for each reporting unit. Key assumptions and estimates used in the Company's 2019 goodwill impairment testing included projections of revenues and EBIT determined using the Company's annual multi-year strategic plan, the estimated WACC, and a projected long-term growth rate. As a result of the goodwill impairment testing performed during fourth quarter 2019, fair values were determined to exceed the carrying values for each reporting unit tested with the exception of crop protection (part of the Additives & Functional Products ("AFP") segment).

In fourth quarter 2019 and 2018, as a result of the annual impairment test of goodwill, the Company recognized goodwill impairments of $45 million and $38 million, respectively, in the crop protection reporting unit. The impairment in 2019 was primarily due to the impact of recent regulatory changes in the European Union on current period and forecasted revenue and EBIT and a decrease in the long-term growth rate for the reporting unit assumed in the goodwill impairment model. The impairment in 2018 was primarily due to the WACC applied to the impairment analysis and the estimated impact of future regulatory changes. The crop protection reporting unit's goodwill after the reduction for impairment was $190 million as of December 31, 2019.

As of December 31, 2019, the reported balance of goodwill included accumulated impairment losses of $106 million, $12 million, and $14 million in the AFP segment, Chemical Intermediates ("CI") segment, and other segments, respectively.
As of December 31, 2018, the reported balance of goodwill included accumulated impairment losses of $61 million, $12 million, and $14 million in the AFP segment, CI segment, and other segments, respectively.

The carrying amounts of intangible assets follow:

		December 31, 2019			December 31, 2018		
(Dollars in millions)	Estimated Useful Life in Years	Gross Carrying Value	Accumulated Amortization	Net Carrying Value	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Amortizable intangible assets:							
Customer relationships	8 - 25	$ 1,566	$ 494	$ 1,072	$ 1,567	$ 419	$ 1,148
Technology	7 - 20	677	343	334	680	294	386
Contracts	5	—	—	—	180	147	33
Other	5 - 37	88	22	66	102	23	79
Indefinite-lived intangible assets:							
Tradenames		529	—	529	529	—	529
Other		10	—	10	10	—	10
Total identified intangible assets		$ 2,870	$ 859	$ 2,011	$ 3,068	$ 883	$ 2,185

Amortization expense of definite-lived intangible assets was $160 million, $164 million, and $164 million for 2019, 2018, and 2017, respectively. Estimated amortization expense for future periods is $130 million in 2020, $125 million in 2021, and $115 million each year for 2022 through 2024.

5. EQUITY INVESTMENTS

Eastman owns a 50 percent or less interest in joint ventures which are accounted for under the equity method. These include a 45 percent interest in a joint venture with China National Tobacco Corporation that manufactures acetate tow in Hefei, China. The Company owns a 50 percent interest in a joint venture that has a manufacturing facility in Nanjing, China. The Nanjing facility produces Eastotac™ hydrocarbon tackifying resins for pressure-sensitive adhesives, caulks, and sealants. These also include a joint venture with a 50 percent interest for the manufacture of compounded cellulose diacetate ("CDA") in Shenzhen, China. CDA is a bio-derived material, which is used in various injection molded applications, including but not limited to ophthalmic frames, tool handles, and other end-use products. At December 31, 2019 and 2018, the Company's total investment in these joint ventures was $106 million and $100 million, respectively, included in "Other noncurrent assets" in the Consolidated Statements of Financial Position.

6. PAYABLES AND OTHER CURRENT LIABILITIES

	December 31,	
(Dollars in millions)	2019	2018
Trade creditors	$ 890	$ 914
Accrued payrolls, vacation, and variable-incentive compensation	176	197
Accrued taxes	89	94
Post-employment obligations	93	80
Dividends payable to shareholders	90	87
Other	280	236
Total payables and other current liabilities	$ 1,618	$ 1,608

The "Other" above consists primarily of accruals for the current portion of operating lease liabilities, interest payable, the current portion of derivative hedging liabilities, the current portion of environmental liabilities, and miscellaneous accruals.

7. INCOME TAXES

Components of earnings before income taxes and the provision for (benefit from) U.S. and other income taxes from operations follow:

	For years ended December 31,		
(Dollars in millions)	2019	2018	2017
Earnings before income taxes			
United States	$ 454	$ 718	$ 654
Outside the United States	448	592	635
Total	$ 902	$ 1,310	$ 1,289
Provision for (benefit from) income taxes			
United States Federal			
Current [(1)]	$ 55	$ 161	$ 220
Deferred [(2)]	19	(11)	(383)
Outside the United States			
Current	62	86	62
Deferred	(32)	(22)	2
State and other			
Current	—	30	13
Deferred	36	(18)	(13)
Total	$ 140	$ 226	$ (99)

(1) A one-time transition tax of $71 million on deferred foreign income tax is included for 2017.
(2) Includes a one-time benefit of $517 million primarily due to the remeasurement of certain net deferred tax liabilities using the lower U.S. corporate income tax rate and a one-time $72 million valuation allowance on deferred tax assets for foreign tax credit carryforwards for 2017.

The following represents the deferred tax (benefit) charge recorded as a component of AOCI in the Consolidated Statements of Financial Position:

	For years ended December 31,		
(Dollars in millions)	2019	2018	2017
Defined benefit pension and other postretirement benefit plans	$ (10)	$ (10)	$ (16)
Derivatives and hedging	(2)	3	8
Total	$ (12)	$ (7)	$ (8)

Total income tax expense (benefit) included in the consolidated financial statements was composed of the following:

	For years ended December 31,		
(Dollars in millions)	2019	2018	2017
Earnings before income taxes	$ 140	$ 226	$ (99)
Other comprehensive income	(12)	(7)	(8)
Total	$ 128	$ 219	$ (107)

Differences between the provision for (benefit from) income taxes and income taxes computed using the U.S. Federal statutory income tax rate follow:

	For years ended December 31,		
(Dollars in millions)	2019	2018	2017
Amount computed using the statutory rate	$ 189	$ 274	$ 450
State income taxes, net	36	6	(4)
Foreign rate variance	(68)	(52)	(150)
Domestic manufacturing deduction	—	—	(18)
Change in reserves for tax contingencies	36	21	20
General business credits	(52)	(60)	(65)
U.S. tax on foreign earnings	(17)	10	29
Foreign tax credits	—	(12)	(26)
Tax law changes and tax loss from outside-U.S. entity reorganizations [(1)]	7	20	(339)
Other	9	19	4
Provision for (benefit from) income taxes	$ 140	$ 226	$ (99)
Effective income tax rate	16%	17%	(8)%

(1) Includes a one-time net benefit primarily due to the remeasurement of certain net deferred tax liabilities using the lower U.S. corporate income tax rate partially offset by the transition tax on deferred foreign income and changes in the valuation of deferred tax assets associated with tax law changes and the tax impact from intercompany reorganization activities in 2017 and a net incremental adjustment to those amounts under the Tax Reform Act in 2018 and 2019.

The 2019 effective tax rate includes a $7 million increase to the provision for income taxes resulting from adjustments to the net tax benefit recognized in fourth quarter 2017 resulting from tax law changes, primarily the Tax Reform Act. The 2019 effective tax rate also includes adjustments to the tax provision to reflect finalization of prior year's income tax returns and an increase to state income taxes related to additional valuation allowance provided against state income tax credits.

The 2018 effective tax rate included the impact of the U.S. corporate tax rate reduction resulting from the Tax Reform Act and the repeal of the domestic manufacturing deduction. The 2018 effective tax rate also included a $20 million increase to the provision for income taxes resulting from adjustments to the net tax benefit recognized in fourth quarter 2017 resulting from tax law changes, primarily the Tax Reform Act. These adjustments related to the one-time transition tax on deferred foreign income and changes in valuation of deferred tax assets associated with tax law changes and outside-U.S. entity reorganizations as part of the formation of an international treasury services center.

The 2017 effective tax rate included a $339 million net tax benefit, primarily resulting from the Tax Reform Act, and a tax loss from outside-U.S. entity reorganizations as part of the formation of an international treasury services center. The net tax benefit included a benefit from the one-time revaluation of deferred tax liabilities, partially offset by a one-time transition tax on deferred foreign income and changes in valuation of deferred tax assets associated with tax law changes and outside-U.S. entity reorganizations as part of the formation of an international treasury services center. The 2017 effective tax rate also included a $20 million benefit due to amendments to prior years' domestic income tax returns, and a $30 million benefit reflecting the finalization of prior years' foreign income tax returns. The 2017 effective tax rate also included an $8 million tax benefit due to a tax ruling permitting deductibility of a liquidation loss on a previously impaired site.

The U.S. Department of Treasury has issued a number of proposed regulations related to implementation of the provisions of the Tax Reform Act and certain states may issue clarifying guidance regarding state income tax conformity to the current federal tax code. Finalization of these regulations in future periods may result in changes in the period of enactment to the amounts currently reported in the Consolidated Statements of Financial Position.

As of December 31, 2019 and 2018, a non-current income tax payable of approximately $6 million and $56 million, respectively, attributable to the transition tax is reflected in "Other long-term liabilities" of the Consolidated Statements of Financial Position.

In conjunction with its evaluation of the provisions of the Tax Reform Act, in 2018, the Company made an accounting policy election to account for taxes resulting from GILTI as a component of the provision for income taxes.

The significant components of deferred tax assets and liabilities follow:

	December 31,	
(Dollars in millions)	2019	2018 [(1)]
Deferred tax assets		
Post-employment obligations	$ 247	$ 230
Net operating loss carryforwards	606	634
Tax credit carryforwards	239	239
Environmental reserves	68	70
Unrealized derivative loss	18	18
Other	173	94
Total deferred tax assets	1,351	1,285
Less: Valuation allowance	453	487
Deferred tax assets less valuation allowance	$ 898	$ 798
Deferred tax liabilities		
Property, plant, and equipment	$ (895)	$ (856)
Intangible assets	(439)	(473)
Investments	(235)	(179)
Other	(178)	(131)
Total deferred tax liabilities	$ (1,747)	$ (1,639)
Net deferred tax liabilities	$ (849)	$ (841)
As recorded in the Consolidated Statements of Financial Position:		
Other noncurrent assets	$ 66	$ 43
Deferred income tax liabilities	(915)	(884)
Net deferred tax liabilities	$ (849)	$ (841)

(1) Revised from Note 7, "Income Taxes", to the Company's 2018 Annual Report on Form 10-K, which reported net operating loss carryforwards as $708 million, valuation allowance as $466 million, and investments as $(274) million.

Beginning January 1, 2019, the Company did not assert indefinite reinvestment on short-term liquid assets of certain foreign subsidiaries. All other foreign earnings, including basis differences, continue to be considered indefinitely reinvested. As of December 31, 2019 unremitted earnings of subsidiaries outside the U.S. totaled approximately $2.5 billion of which a substantial portion has already been subject to U.S. tax. The Company has not determined the deferred tax liability associated with these unremitted earnings and basis differences, as such determination is not practicable.

For certain consolidated foreign subsidiaries, income and losses directly flow through to taxable income in the U.S. These entities are also subject to taxation in the foreign tax jurisdictions. Net operating loss carryforwards exist to offset future taxable income in foreign tax jurisdictions and valuation allowances are provided to reduce deferred related tax assets if it is more likely than not that this benefit will not be realized. Changes in the estimated realizable amount of deferred tax assets associated with net operating losses for these entities could result in changes in the deferred tax asset valuation allowance in the foreign tax jurisdiction. At the same time, because these entities are also subject to tax in the U.S., a deferred tax liability for the expected future taxable income will be established concurrently. Therefore, the impact of any reversal of valuation allowances on consolidated income tax expense will be only to the extent that there are differences between the U.S. statutory tax rate and the tax rate in the foreign jurisdiction. A valuation allowance of $24 million at December 31, 2019 has been provided against the deferred tax asset resulting from these operating loss carryforwards.

At December 31, 2019, foreign net operating loss carryforwards totaled $2.1 billion. Of this total, $23 million will expire in 1 to 20 years and $2.1 billion have no expiration date. A valuation allowance of approximately $262 million has been provided against such net operating loss carryforwards.

At December 31, 2019, federal net operating loss carryforwards of $8 million were available to offset future taxable income, which expire from 2028 to 2030. At December 31, 2019, foreign tax credit carryforwards of approximately $75 million were available to reduce possible future U.S. income taxes and which expire from 2020 to 2028. As a result of the Tax Reform Act, the Company may no longer be able to utilize certain U.S. foreign tax credit carryforwards. A valuation allowance of $45 million has been established on a portion of deferred tax assets as of December 31, 2019.

At December 31, 2019, a partial valuation allowance of $72 million has been provided against state tax credits that the Company may not be able to utilize.

A partial valuation allowance of $47 million has been established for the Solutia, Inc. ("Solutia") state net operating loss carryforwards. The valuation allowance will be retained until there is sufficient positive evidence to conclude that it is more likely than not that the deferred tax assets will be realized, or the related statute expires.

Amounts due to and from tax authorities as recorded in the Consolidated Statements of Financial Position:

	December 31,	
(Dollars in millions)	2019	2018
Miscellaneous receivables	$ 211	$ 135
Payables and other current liabilities	$ 36	$ 43
Other long-term liabilities	139	162
Total income taxes payable	$ 175	$ 205

A reconciliation of the beginning and ending amounts of unrecognized tax benefits is as follows:

(Dollars in millions)	2019	2018	2017
Balance at January 1	$ 182	$ 142	$ 114
Adjustments based on tax positions related to current year	22	44	29
Lapse of statute of limitations	(2)	(4)	(1)
Balance at December 31 [(1)]	$ 202	$ 182	$ 142

(1) All of the unrecognized tax benefits would, if recognized, impact the Company's effective tax rate.

A reconciliation of the beginning and ending amounts of accrued interest related to unrecognized tax positions is as follows:

(Dollars in millions)	2019	2018	2017
Balance at January 1	$ 10	$ 6	$ 4
Expense for interest, net of tax	5	4	3
Income for interest, net of tax	(2)	—	(1)
Balance at December 31	$ 13	$ 10	$ 6

Accrued penalties related to unrecognized tax positions were immaterial as of December 31, 2019, 2018, and 2017.

Eastman files income tax returns in the U.S. and various state and foreign jurisdictions. The Company is no longer subject to U.S. Federal income tax examinations by tax authorities for years before 2011 for Eastman legal entities and years before 2002 for Solutia legal entities. With few exceptions, Eastman is no longer subject to state and local income tax examinations by tax authorities for years before 2011. Solutia and related subsidiaries are no longer subject to state and local income tax examinations for years before 2000. With few exceptions, the Company is no longer subject to foreign income tax examinations by tax authorities for tax years before 2011.

It is reasonably possible that, as a result of the resolution of federal, state, and foreign examinations and appeals, and the expiration of various statutes of limitation, unrecognized tax benefits could decrease within the next twelve months by up to $28 million.

8. BORROWINGS

(Dollars in millions)	December 31, 2019	December 31, 2018
Borrowings consisted of:		
2.7% notes due January 2020	$ —	$ 250
4.5% notes due January 2021	185	185
3.5% notes due December 2021	298	297
3.6% notes due August 2022	741	739
1.50% notes due May 2023 (1)	840	855
7 1/4% debentures due January 2024	198	197
7 5/8% debentures due June 2024	43	43
3.8% notes due March 2025	695	691
1.875% notes due November 2026 (1)	556	566
7.60% debentures due February 2027	195	195
4.5% notes due December 2028	493	492
4.8% notes due September 2042	493	493
4.65% notes due October 2044	874	872
Commercial paper and short-term borrowings	171	243
Credit facilities borrowings	—	50
Total borrowings	5,782	6,168
Borrowings due within one year	171	243
Long-term borrowings	$ 5,611	$ 5,925

(1) The carrying value of the euro-denominated 1.50% notes due May 2023 and 1.875% notes due November 2026 will fluctuate with changes in the euro exchange rate. The carrying value of these euro-denominated borrowings have been designated as non-derivative net investment hedges of a portion of the Company's net investments in euro functional-currency denominated subsidiaries to offset foreign currency fluctuations.

In fourth quarter 2019, the Company repaid the 2.7% notes due January 2020 ($250 million principal) using available cash. There were no material debt extinguishment costs associated with the early repayment of this debt. The total consideration for this redemption is reported under financing activities on the Consolidated Statements of Cash Flows.

In fourth quarter 2018, the Company sold 3.5% notes due December 2021 in the principal amount of $300 million and 4.5% notes due December 2028 in the principal amount of $500 million. Net proceeds from the notes were $789 million and were used, together with available cash, for the early and full repayment of the 5.5% notes due November 2019 ($250 million principal) and the partial redemption of the 2.7% notes due January 2020 ($550 million principal). Total consideration for these redemptions was $806 million ($800 million total principal and $6 million for the early redemption premiums) and is reported as financing activities on the Consolidated Statements of Cash Flows. The early repayment resulted in a charge of $7 million for early debt extinguishment costs which were primarily attributable to the early redemption premiums and related unamortized costs. The book value of the redeemed debt was $799 million.

Revolving Credit Facilities and Commercial Paper Borrowings

The Company has access to a $1.50 billion revolving credit agreement (the "Credit Facility") expiring October 2023. Borrowings under the Credit Facility are subject to interest at varying spreads above quoted market rates and a commitment fee is paid on the total unused commitment. The Credit Facility provides available liquidity for general corporate purposes and supports commercial paper borrowings. Commercial paper borrowings are classified as short-term. At December 31, 2019 and 2018, the Company had no outstanding borrowings under the Credit Facility. At December 31, 2019, commercial paper borrowings were $170 million with a weighted average interest rate of 2.03 percent. At December 31, 2018, the Company's commercial paper borrowings were $130 million with a weighted average interest rate of 2.91 percent.

The Company has access to up to $250 million under an accounts receivable securitization agreement (the "A/R Facility") that expires April 2020. Eastman Chemical Financial Corporation ("ECFC"), a subsidiary of the Company, has an agreement to sell interests in trade receivables under the A/R Facility to a third party purchaser. Third party creditors of ECFC have first priority claims on the assets of ECFC before those assets would be available to satisfy the Company's general obligations. Borrowings under the A/R Facility are subject to interest rates based on a spread over the lender's borrowing costs, and ECFC pays a fee to maintain availability of the A/R Facility. At December 31, 2019, the Company had no borrowings under the A/R Facility. At December 31, 2018, the Company's borrowings under the A/R Facility were $50 million with an interest rate of 3.39 percent.

Through September 2019, the Company had access to borrowings of up to €150 million ($163 million) under a receivables facility based on the discounted value of selected customer accounts receivable. These arrangements included receivables in the United States, Belgium, and Finland, and were subject to various eligibility requirements. Borrowings under this facility were subject to interest at an agreed spread above LIBOR and EURIBOR plus administration and insurance fees and were classified as short-term. In October 2019, this receivables facility was terminated and the balance was repaid using available A/R Facility borrowings. At December 31, 2018, the Company's amount of outstanding borrowings under this facility were $112 million with a weighted average interest rate of 1.70 percent.

The Credit Facility and A/R Facility contain customary covenants, including requirements to maintain certain financial ratios, that determine the events of default, amounts available, and terms of borrowings. The Company was in compliance with all covenants at both December 31, 2019 and December 31, 2018.

Fair Value of Borrowings

Eastman has classified its total borrowings at December 31, 2019 and 2018 under the fair value hierarchy as defined in the accounting policies in Note 1, "Significant Accounting Policies". The fair value for fixed-rate debt securities is based on quoted market prices for the same or similar debt instruments and is classified as Level 2. The fair value for the Company's other borrowings primarily under the commercial paper and receivables facility equals the carrying value and is classified as Level 2. At December 31, 2019 and 2018, the fair value of total borrowings was $6.275 billion and $6.216 billion, respectively. The Company had no borrowings classified as Level 1 or Level 3 as of December 31, 2019 and 2018.

9. DERIVATIVE AND NON-DERIVATIVE FINANCIAL INSTRUMENTS

Overview of Hedging Programs

Eastman is exposed to market risks, such as changes in foreign currency exchange rates, commodity prices, and interest rates. To mitigate these market risks and their effects on the cash flows of the underlying transactions and investments in foreign subsidiaries, the Company uses various derivative and non-derivative financial instruments, when appropriate, in accordance with the Company's hedging strategy and policies. Designation is performed on a specific exposure basis to support hedge accounting. The Company does not enter into derivative transactions for speculative purposes.

Cash Flow Hedges

Cash flow hedges are derivative instruments designated as and used to hedge the exposure to variability in expected future cash flows that are attributable to a particular risk. The derivative instruments that are designated and qualify as a cash flow hedge are reported on the balance sheet at fair value and the changes in fair value of these hedging instruments are offset in part or in whole by corresponding changes in the anticipated cash flows of the underlying exposures being hedged. The change in the hedge instrument is reported as a component of AOCI located in the Consolidated Statements of Financial Position and reclassified into earnings in the same period or periods during which the hedged transaction affects earnings. Cash flows from cash flow hedges are classified as operating activities in the Consolidated Statements of Cash Flows.

Foreign Currency Exchange Rate Hedging

Eastman manufactures and sells its products in a number of countries throughout the world and, as a result, is exposed to changes in foreign currency exchange rates. To manage the volatility relating to these exposures, the Company nets the exposures on a consolidated basis to take advantage of natural offsets. To manage the remaining exposure, the Company enters into currency option and forward cash flow hedges to hedge probable anticipated, but not yet committed, export sales and purchase transactions expected within a rolling three year period and denominated in foreign currencies (principally the euro). Additionally, the Company, from time to time, enters into forward exchange contract cash flow hedges to hedge certain firm commitments denominated in foreign currencies.

Commodity Hedging

Certain raw material and energy sources used by Eastman, as well as sales of certain commodity products by the Company, are subject to price volatility caused by weather, supply and demand conditions, economic variables and other unpredictable factors. This volatility is primarily related to the market pricing of propane, ethane, natural gas, paraxylene, ethylene, and benzene. In order to mitigate expected fluctuations in market prices, from time to time, the Company enters into option and forward contracts and designates these contracts as cash flow hedges. The Company currently hedges commodity price risks using derivative financial instrument transactions within a rolling three year period. The Company weights its hedge portfolio more heavily in the first year with declining coverage over the remaining periods.

Interest Rate Hedging

Eastman's policy is to manage interest expense using a mix of fixed and variable rate debt. To manage interest rate risk effectively, the Company, from time to time, enters into cash flow interest rate derivative instruments, primarily forward starting swaps and treasury locks, to hedge the Company's exposure to movements in interest rates prior to anticipated debt offerings. These instruments are designated as cash flow hedges.

Fair Value Hedges

Fair value hedges are defined as derivative or non-derivative instruments designated as and used to hedge the exposure to changes in the fair value of an asset or a liability or an identified portion thereof that is attributable to a particular risk. The derivative instruments that are designated and qualify as fair value hedges are recognized on the balance sheet at fair value and the changes in fair value of these hedging instruments are offset in part or in whole by corresponding changes in the anticipated fair value of the underlying exposures being hedged. The net of the change in the hedge instrument and item being hedged for qualifying fair value hedges is recognized in earnings in the same period or periods during which the hedged transaction affects earnings. Cash flows from fair value hedges are classified as operating activities in the Consolidated Statements of Cash Flows.

Interest Rate Hedging

Eastman's policy is to manage interest expense using a mix of fixed and variable rate debt. To manage the Company's mix of fixed and variable rate debt effectively, from time to time, the Company enters into interest rate swaps in which the Company agrees to exchange the difference between fixed and variable interest amounts calculated by reference to an agreed upon notional principal amount. These swaps are designated as hedges of the fair value of the underlying debt obligations and the interest rate differential is reflected as an adjustment to interest expense over the life of the swaps.

Net Investment Hedges

Net investment hedges are defined as derivative or non-derivative instruments designated as and used to hedge the foreign currency exposure of the net investment in certain foreign operations. The net of the change in the hedge instrument and item being hedged for qualifying net investment hedges is reported as a component of the CTA within AOCI located in the Consolidated Statements of Financial Position. Recognition in earnings of amounts previously recognized in CTA is limited to circumstances such as complete or substantially complete liquidation of the net investment in the hedged foreign operation. In the event of a complete or substantially complete liquidation of the net investment, cash flows from net investment hedges are classified as investing activities in the Consolidated Statements of Cash Flows.

For derivative cross-currency interest rate swap net investment hedges, gains and losses representing hedge components excluded from the assessment of effectiveness are recognized in CTA within AOCI and recognized in earnings through the periodic swap interest accruals. The cross-currency interest rate swaps designated as net investment hedges are included as part of "Other long-term liabilities" or "Other noncurrent assets" within the Consolidated Statements of Financial Position. Cash flows from excluded components are classified as operating activities in the Consolidated Statements of Cash Flows.

In January 2018, Eastman entered into fixed-to-fixed cross-currency swaps and designated these swaps to hedge a portion of its net investment in a euro functional currency denominated subsidiary against foreign currency fluctuations. These contracts involve the exchange of fixed U.S. dollars with fixed euro interest payments periodically over the life of the contracts and an exchange of the notional amounts at maturity. The fixed-to-fixed cross-currency swaps include €150 million ($180 million) maturing January 2021 and €266 million ($320 million) maturing August 2022.

In October 2018, Eastman entered into fixed-to-fixed cross-currency swaps and designated these swaps to hedge a portion of its net investment in a euro functional currency denominated subsidiary against foreign currency fluctuations. These contracts involve the exchange of fixed U.S. dollars with fixed euro interest payments periodically over the life of the contracts and an exchange of the notional amounts at maturity. The fixed-to-fixed cross-currency swaps include €165 million ($190 million) maturing January 2024, €104 million ($120 million) maturing March 2025, and €165 million ($190 million) maturing February 2027.

Summary of Financial Position and Financial Performance of Hedging Instruments

The following table presents the notional amounts outstanding at December 31, 2019 and 2018 associated with Eastman's hedging programs.

Notional Outstanding	**December 31, 2019**	**December 31, 2018**
Derivatives designated as cash flow hedges:		
Foreign Exchange Forward and Option Contracts (in millions)		
EUR/USD (in EUR)	€630	€263
Commodity Forward and Collar Contracts		
Feedstock (in million barrels)	1	5
Energy (in million british thermal units)	27	40
Derivatives designated as fair value hedges:		
Fixed-for-floating interest rate swaps (in millions)	$75	$75
Derivatives designated as net investment hedges:		
Cross-currency interest rate swaps (in millions)		
EUR/USD (in EUR)	€851	€851
Non-derivatives designated as net investment hedges:		
Foreign Currency Net Investment Hedges (in millions)		
EUR/USD (in EUR)	€1,243	€1,241

Fair Value Measurements

For additional information on fair value measurement, see Note 1, "Significant Accounting Policies".

All the Company's derivative assets and liabilities are currently classified as Level 2. Level 2 fair value is based on estimates using standard pricing models. These standard pricing models use inputs that are derived from or corroborated by observable market data such as interest rate yield curves and currency spot and forward rates. The fair value of commodity contracts is derived using forward curves supplied by an industry recognized and unrelated third party. In addition, on an ongoing basis, the Company tests a subset of its valuations against valuations received from the transaction's counterparty to validate the accuracy of its standard pricing models. Counterparties to these derivative contracts are highly rated financial institutions which the Company believes carry minimal risk of nonperformance and the Company diversifies its positions among such counterparties to reduce its exposure to counterparty risk and credit losses. The Company monitors the creditworthiness of its counterparties on an ongoing basis. The Company did not realize a credit loss during the years ended December 31, 2019 or 2018.

All the Company's derivative contracts are subject to master netting arrangements, or similar agreements, which provide for the option to settle contracts on a net basis when they settle on the same day and in the same currency. In addition, these arrangements provide for a net settlement of all contracts with a given counterparty in the event that the arrangement is terminated due to the occurrence of default or a termination event. The Company does not have any cash collateral due under such agreements.

The Company has elected to present derivative contracts on a gross basis within the Consolidated Statements of Financial Position. The following table presents the financial assets and liabilities valued on a recurring and gross basis and includes where the financial assets and liabilities are located within the Consolidated Statements of Financial Position as of December 31, 2019 and 2018.

The Financial Position and Fair Value Measurements of Hedging Instruments on a Gross Basis

(Dollars in millions)

Derivative Type	Statements of Financial Position Location	December 31, 2019 Level 2	December 31, 2018 Level 2
Derivatives designated as cash flow hedges:			
Commodity contracts	Other current assets	$ —	$ 4
Foreign exchange contracts	Other current assets	13	15
Foreign exchange contracts	Other noncurrent assets	2	4
Derivatives designated as fair value hedges:			
Fixed-for-floating interest rate swap	Other current assets	1	1
Derivatives designated as net investment hedges:			
Cross-currency interest rate swaps	Other noncurrent assets	68	26
Total Derivative Assets		$ 84	$ 50
Derivatives designated as cash flow hedges:			
Commodity contracts	Payables and other current liabilities	$ 26	$ 24
Commodity contracts	Other long-term liabilities	2	5
Foreign exchange contracts	Payables and other current liabilities	1	—
Foreign exchange contracts	Other long-term liabilities	2	—
Derivatives designated as fair value hedges:			
Fixed-for-floating interest rate swap	Long-term borrowings	1	4
Total Derivative Liabilities		$ 32	$ 33
Total Net Derivative Assets (Liabilities)		$ 52	$ 17

In addition to the fair value associated with derivative instruments designated as cash flow hedges, fair value hedges, and net investment hedges noted in the table above, the Company had a carrying value of $1.4 billion associated with non-derivative instruments designated as foreign currency net investment hedges as of both December 31, 2019 and 2018. The designated foreign currency-denominated borrowings are included as part of "Long-term borrowings" within the Consolidated Statements of Financial Position.

As of December 31, 2019 and 2018, the following amounts were included within the Consolidated Statements of Financial Position related to cumulative basis adjustments for fair value hedges.

(Dollars in millions)	Carrying amount of the hedged liabilities		Cumulative amount of fair value hedging loss adjustment included in the carrying amount of the hedged liability	
Line item in the Consolidated Statements of Financial Position in which the hedged item is included	**December 31, 2019**	**December 31, 2018**	**December 31, 2019**	**December 31, 2018**
Long-term borrowings [1]	$ 763	$ 759	$ (7)	$ (12)

[1] At both December 31, 2019 and 2018, the cumulative amount of fair value hedging loss adjustment remaining for hedged liabilities for which hedge accounting has been discontinued was $7 million.

The following table presents the effect of the Company's hedging instruments on Other comprehensive income (loss), net of tax ("OCI") and financial performance for the twelve months ended December 31, 2019 and 2018:

(Dollars in millions)	Change in amount of after tax gain/(loss) recognized in OCI on Derivatives		Pre-tax amount of gain/(loss) reclassified from AOCI into income	
	December 31,		December 31,	
Hedging Relationships	**2019**	**2018**	**2019**	**2018**
Derivatives in cash flow hedging relationships:				
Commodity contracts	$ (2)	$ —	$ (40)	$ (3)
Foreign exchange contracts	(5)	3	26	29
Forward starting interest rate and treasury lock swap contracts	4	4	(6)	(5)
Non-derivatives in net investment hedging relationships (pre-tax):				
Net investment hedges	26	67	—	—
Derivatives in net investment hedging relationships (pre-tax):				
Cross-currency interest rate swaps	19	26	—	—
Cross-currency interest rate swaps excluded component	23	—	—	—

The following table presents the effect of fair value and cash flow hedge accounting on the Consolidated Statements of Earnings, Comprehensive Income and Retained Earnings for 2019 and 2018.

Location and Amount of Gain or (Loss) Recognized in Earnings on Fair Value and Cash Flow Hedging Relationships

	Twelve Months					
	2019			2018		
(Dollars in millions)	Sales	Cost of Sales	Net interest expense	Sales	Cost of Sales	Net interest expense
Total amounts of income and expense line items presented in the Consolidated Statements of Earnings, Comprehensive Income and Retained Earnings in which the effects of fair value or cash flow hedges are recognized	$ 9,273	$ 7,039	$ 218	$ 10,151	$ 7,672	$ 235
The effects of fair value and cash flow hedging:						
Gain or (loss) on fair value hedging relationships:						
Interest contracts (fixed-for-floating interest rate swaps):						
Hedged items			1			—
Derivatives designated as hedging instruments			(1)			—
Gain or (loss) on cash flow hedging relationships:						
Interest contracts (forward starting interest rate and treasury lock swap contracts):						
Amount reclassified from AOCI into earnings			(6)			(5)
Commodity Contracts:						
Amount reclassified from AOCI into earnings		(40)			(3)	
Foreign Exchange Contracts:						
Amount reclassified from AOCI into earnings	26			29		

The Company enters into foreign exchange derivatives denominated in multiple currencies which are transacted and settled in the same quarter. These derivatives are not designated as hedges due to the short-term nature and the gains or losses on these derivatives are marked-to-market in line item "Other (income) charges, net" of the Consolidated Statements of Earnings, Comprehensive Income and Retained Earnings. The Company recognized a net loss of $2 million and net loss of $13 million during 2019 and 2018, respectively, on these derivatives.

Pre-tax monetized positions and MTM gains and losses from raw materials and energy, currency, and certain interest rate hedges that were included in AOCI included losses of $50 million at December 31, 2019 and losses of $112 million at December 31, 2018. Losses in AOCI decreased in 2019 compared to 2018 primarily as a result of a decrease in foreign currency exchange rates, particularly the euro. If realized, approximately $24 million in pre-tax losses will be reclassified into earnings during the next 12 months.

10. RETIREMENT PLANS

As described below, Eastman offers various postretirement benefits to its employees.

Defined Contribution Plans

Eastman sponsors a defined contribution employee stock ownership plan (the "ESOP"), which is a component of the Eastman Investment Plan and Employee Stock Ownership Plan ("EIP/ESOP"), under Section 401(a) of the Internal Revenue Code. Eastman made a contribution in February 2020 to the EIP/ESOP for substantially all U.S. employees equal to 5 percent of their eligible compensation for the 2019 plan year. Employees may allocate contributions to other investment funds within the EIP from the ESOP at any time without restrictions. Allocated shares in the ESOP totaled 2,076,203; 2,119,614; and 2,130,176 shares as of December 31, 2019, 2018, and 2017, respectively. Dividends on shares held by the EIP/ESOP are charged to retained earnings. All shares held by the EIP/ESOP are treated as outstanding in computing earnings per share ("EPS").

In 2006, the Company amended its EIP/ESOP to provide a Company match of 50 percent of the first 7 percent of an employee's compensation contributed to the plan for employees who are hired on or after January 1, 2007. Employees who are hired on or after January 1, 2007, are also eligible for the contribution to the ESOP as described above.

Charges for domestic contributions to the EIP/ESOP were $68 million, $67 million, and $64 million for 2019, 2018, and 2017, respectively.

Defined Benefit Pension Plans and Other Postretirement Benefit Plans

Pension Plans

Eastman maintains defined benefit pension plans that provide eligible employees with retirement benefits.

Effective January 1, 2000, the Company's Eastman Retirement Assistance Plan, a U.S. defined benefit pension plan, was amended. Employees' accrued pension benefits earned prior to January 1, 2000 are calculated based on previous plan provisions using the employee's age, years of service, and final average compensation as defined in the plans. The amended plan uses a pension equity formula to calculate an employee's retirement benefits from January 1, 2000 forward. Benefits payable will be the combined pre-2000 and post-1999 benefits. Employees hired on or after January 1, 2007 are not eligible to participate in Eastman's U.S. defined benefit pension plans.

Benefits are paid to employees from trust funds. Contributions to the trust funds are made as permitted by laws and regulations. The pension trust funds do not directly own any of the Company's common stock.

Pension coverage for employees of Eastman's non-U.S. operations is provided, to the extent deemed appropriate, through separate plans. The Company systematically provides for obligations under such plans by depositing funds with trustees, under insurance policies, or by book reserves.

Other Postretirement Benefit Plans

Under its other postretirement benefit plans in the U.S., Eastman provides life insurance for eligible retirees hired prior to January 1, 2007. Eastman provides a subsidy for pre-Medicare health care and dental benefits to eligible retirees hired prior to January 1, 2007 that will end on December 31, 2021. Company funding is also provided for eligible Medicare retirees hired prior to January 1, 2007 with a health reimbursement arrangement. A few of the Company's non-U.S. operations have supplemental health benefit plans for certain retirees, the cost of which is not significant to the Company.

Below is a summary balance sheet of the change in plan assets during 2019 and 2018, the funded status of the plans and amounts recognized in the Consolidated Statements of Financial Position.

Summary of Changes

	Pension Plans				Postretirement Benefit Plans	
	2019		2018		2019	2018
(Dollars in millions)	U.S.	Non-U.S.	U.S.	Non-U.S.		
Change in projected benefit obligation:						
Benefit obligation, beginning of year	$ 1,959	$ 840	$ 2,154	$ 893	$ 672	$ 738
Service cost	27	14	35	14	—	—
Interest cost	76	20	67	20	25	22
Actuarial (gain) loss	200	113	(119)	(20)	71	(33)
Plan participants' contributions	—	1	—	1	10	11
Effect of currency exchange	—	11	—	(45)	1	(1)
Benefits paid	(195)	(27)	(178)	(23)	(63)	(65)
Benefit obligation, end of year	$ 2,067	$ 972	$ 1,959	$ 840	$ 716	$ 672
Change in plan assets:						
Fair value of plan assets, beginning of year	$ 1,820	$ 713	$ 2,054	$ 773	$ 135	$ 148
Actual return on plan assets	289	102	(61)	(19)	27	(6)
Effect of currency exchange	—	9	—	(39)	—	—
Company contributions	5	22	5	20	42	43
Reserve for third party contributions	—	—	—	—	(12)	4
Plan participants' contributions	—	1	—	1	10	11
Benefits paid	(195)	(27)	(178)	(23)	(63)	(65)
Fair value of plan assets, end of year	$ 1,919	$ 820	$ 1,820	$ 713	$ 139	$ 135
Funded status at end of year	$ (148)	$ (152)	$ (139)	$ (127)	$ (577)	$ (537)
Amounts recognized in the Consolidated Statements of Financial Position consist of:						
Other noncurrent assets	$ 13	$ —	$ 2	$ —	$ 50	$ 41
Current liabilities	(3)	(1)	(4)	(1)	(47)	(45)
Post-employment obligations	(158)	(151)	(137)	(126)	(580)	(533)
Net amount recognized, end of year	$ (148)	$ (152)	$ (139)	$ (127)	$ (577)	$ (537)
Accumulated benefit obligation	$ 2,005	$ 919	$ 1,900	$ 796		
Amounts recognized in accumulated other comprehensive income consist of:						
Prior service (credit) cost	$ 2	$ —	$ 2	$ —	$ (143)	$ (182)

Information for pension plans with projected benefit obligations in excess of plan assets:

(Dollars in millions)	2019		2018	
	U.S.	Non-U.S.	U.S.	Non-U.S.
Projected benefit obligation	$ 1,673	$ 972	$ 1,726	$ 840
Fair value of plan assets	1,512	820	1,585	713

Information for pension plans with accumulated benefit obligations in excess of plan assets:

(Dollars in millions)	2019		2018	
	U.S.	Non-U.S.	U.S.	Non-U.S.
Projected benefit obligation	$ 1,673	$ 651	$ 1,726	$ 568
Accumulated benefit obligation	1,611	625	1,667	547
Fair value of plan assets	1,512	513	1,585	448

Summary of Benefit Costs and Other Amounts Recognized in Other Comprehensive Income

	Pension Plans						Postretirement Benefit Plans		
	2019		2018		2017		2019	2018	2017
(Dollars in millions)	U.S.	Non-U.S.	U.S.	Non-U.S.	U.S.	Non-U.S.			
Components of net periodic benefit (credit) cost:									
Service cost	$ 27	$ 14	$ 35	$ 14	$ 37	$ 13	$ —	$ —	$ 3
Interest cost	76	20	67	20	66	20	25	22	23
Expected return on plan assets	(128)	(32)	(147)	(37)	(140)	(35)	(5)	(5)	(5)
Amortization of:									
Prior service (credit) cost	—	—	(1)	1	(4)	1	(39)	(40)	(40)
Mark-to-market pension and other postretirement benefits (gain) loss, net	39	43	89	36	(37)	(7)	61	(26)	23
Net periodic benefit (credit) cost	$ 14	$ 45	$ 43	$ 34	$ (78)	$ (8)	$ 42	$ (49)	$ 4
Other changes in plan assets and benefit obligations recognized in other comprehensive income:									
Amortization of:									
Prior service (credit) cost	$ —	$ —	$ (1)	$ 1	$ (4)	$ 1	$ (39)	$ (40)	$ (40)
Total	$ —	$ —	$ (1)	$ 1	$ (4)	$ 1	$ (39)	$ (40)	$ (40)

The estimated prior service credit for the other postretirement benefit plans that will be amortized from AOCI into net periodic cost in 2020 is $38 million.

Plan Assumptions

The assumptions used to develop the projected benefit obligation for Eastman's significant U.S. and non-U.S. defined benefit pension plans and U.S. postretirement benefit plans are provided in the following tables.

	Pension Plans						Postretirement Benefit Plans		
	2019		2018		2017		2019	2018	2017
Weighted-average assumptions used to determine benefit obligations for years ended December 31:	**U.S.**	**Non-U.S.**	**U.S.**	**Non-U.S.**	**U.S.**	**Non-U.S.**			
Discount rate	3.25%	1.56%	4.29%	2.35%	3.57%	2.25%	3.21%	4.26%	3.54%
Rate of compensation increase	3.25%	2.94%	3.25%	2.94%	3.25%	2.95%	3.25%	3.25%	3.25%
Health care cost trend									
Initial							6.50%	6.50%	6.75%
Decreasing to ultimate trend of							5.00%	5.00%	5.00%
in year							2026	2025	2025
Weighted-average assumptions used to determine net periodic cost for years ended December 31:	**U.S.**	**Non-U.S.**	**U.S.**	**Non-U.S.**	**U.S.**	**Non-U.S.**			
Discount rate	4.29%	2.35%	3.57%	2.25%	3.89%	2.33%	4.26%	3.54%	3.91%
Discount rate for service cost	4.32%	2.35%	3.64%	2.25%	3.89%	2.33%	4.05%	3.28%	4.31%
Discount rate for interest cost	3.96%	2.35%	3.18%	2.25%	3.24%	2.33%	3.93%	3.14%	3.28%
Expected return on assets	7.43%	4.49%	7.48%	4.83%	7.49%	5.02%	3.75%	3.75%	3.75%
Rate of compensation increase	3.25%	2.94%	3.25%	2.95%	3.25%	2.94%	3.25%	3.25%	3.25%
Health care cost trend									
Initial							6.50%	6.75%	7.00%
Decreasing to ultimate trend of							5.00%	5.00%	5.00%
in year							2025	2025	2021

The Company calculates service and interest cost components of net periodic benefit costs for its significant defined benefit pension and other postretirement benefit plans by applying the specific spot rates along the yield curve to the plans' projected cash flows.

A 6.50 percent rate of increase in per capita cost of covered health care benefits is assumed for 2020. The rate is assumed to decrease gradually to five percent in 2026 and remain at that level thereafter. A one percent increase or decrease in health care cost trend would have had no material impact on the 2019 service and interest costs or the 2019 benefit obligation, because the Company's contributions for benefits are fixed.

In 2017, the Company performed a five year experience study on assumptions for the U.S. plans, including a review of the mortality tables. As a result of the study, the Company has updated the mortality assumptions used to a modified RP-2017 table with a modified MP-2017 improvement scale and no collar adjustment.

The fair value of plan assets for the U.S. pension plans at December 31, 2019 and 2018 was $1.9 billion and $1.8 billion, respectively, while the fair value of plan assets at December 31, 2019 and 2018 for non-U.S. pension plans was $820 million and $713 million, respectively. At December 31, 2019 and 2018, the expected weighted-average long-term rate of return on U.S. pension plan assets was 7.37 percent and 7.43 percent, respectively. The expected weighted-average long-term rate of return on non-U.S. pension plans assets was 4.26 percent and 4.49 percent at December 31, 2019 and 2018, respectively.

Plan Assets

The following tables reflect the fair value of the defined benefit pension plans assets.

(Dollars in millions)			Fair Value Measurements at December 31, 2019					
			Quoted Prices in Active Markets for Identical Assets (Level 1)		Significant Other Observable Inputs (Level 2)		Significant Unobservable Inputs (Level 3)	
Description	Total Fair Value							
Pension Assets:	U.S.	Non-U.S.	U.S.	Non-U.S.	U.S.	Non-U.S.	U.S.	Non-U.S.
Cash & Cash Equivalents [1]	$ 35	$ 72	$ 35	$ 72	$ —	$ —	$ —	$ —
Public Equity - United States [2]	1	—	1	—	—	—	—	—
Other Investments [3]	—	57	—	—	—	—	—	57
Total Assets at Fair Value	$ 36	$ 129	$ 36	$ 72	$ —	$ —	$ —	$ 57
Investments Measured at Net Asset Value [4]	1,883	691						
Total Assets	$ 1,919	$ 820						

(Dollars in millions)			Fair Value Measurements at December 31, 2018					
			Quoted Prices in Active Markets for Identical Assets (Level 1)		Significant Other Observable Inputs (Level 2)		Significant Unobservable Inputs (Level 3)	
Description	Total Fair Value							
Pension Assets:	U.S.	Non-U.S.	U.S.	Non-U.S.	U.S.	Non-U.S.	U.S.	Non-U.S.
Cash & Cash Equivalents [1]	$ 16	$ 53	$ 16	$ 53	$ —	$ —	$ —	$ —
Public Equity - United States [2]	2	—	2	—	—	—	—	—
Other Investments [3]	—	51	—	—	—	—	—	51
Total Assets at Fair Value	$ 18	$ 104	$ 18	$ 53	$ —	$ —	$ —	$ 51
Investments Measured at Net Asset Value [4]	1,802	609						
Total Assets	$ 1,820	$ 713						

(1) Cash & Cash Equivalents: Funds generally invested in actively managed collective trust funds or interest bearing accounts.
(2) Public Equity - United States: Common stock equity securities which are primarily valued using a market approach based on the quoted market prices.
(3) Other Investments: Primarily consist of insurance contracts which are generally valued using a crediting rate that approximates market returns and investments in underlying securities whose market values are unobservable and determined using pricing models, discounted cash flow methodologies, or similar techniques.
(4) Investments Measured at Net Asset Value: The underlying debt and public equity investments in this category are generally held in common trust funds, which are either actively or passively managed investment vehicles, that are valued at the net asset value per unit/share multiplied by the number of units/shares held as of the measurement date. The other alternative investments in this category are valued under the practical expedient method which is based on the most recently reported net asset value provided by the management of each private investment fund, adjusted as appropriate, for any lag between the date of the financial reports and the measurement date.

The following tables reflect the fair value of the postretirement benefit plan assets. The postretirement benefit plan is for the voluntary employees' beneficiary association ("VEBA") trust the Company assumed as part of the Solutia acquisition.

(Dollars in millions)		Fair Value Measurements at December 31, 2019		
Description	**Total Fair Value**	**Quoted Prices in Active Markets for Identical Assets (Level 1)**	**Significant Other Observable Inputs (Level 2)**	**Significant Unobservable Inputs (Level 3)**
Postretirement Benefit Plan Assets:				
Debt [1]:				
Fixed Income (U.S.)	$ 85	$ —	$ 85	$ —
Fixed Income (Non-U.S.)	26	—	26	—
Total	$ 111	$ —	$ 111	$ —

(Dollars in millions)		Fair Value Measurements at December 31, 2018		
Description	**Total Fair Value**	**Quoted Prices in Active Markets for Identical Assets (Level 1)**	**Significant Other Observable Inputs (Level 2)**	**Significant Unobservable Inputs (Level 3)**
Postretirement Benefit Plan Assets:				
Cash & Cash Equivalents [2]	$ 3	$ 3	$ —	$ —
Debt [1]:				
Fixed Income (U.S.)	78	—	78	—
Fixed Income (Non-U.S.)	26	—	26	—
Total	$ 107	$ 3	$ 104	$ —

(1) Debt: The fixed income securities are primarily valued upon a market approach, using matrix pricing and considering a security's relationship to other securities for which quoted prices in an active market may be available, or an income approach, converting future cash flows to a single present value amount. Inputs used in developing fair value estimates include reported trades, broker quotes, benchmark yields, and base spreads.

(2) Cash & Cash Equivalents: Funds generally invested in actively managed collective trust funds or interest bearing accounts.

The Company valued assets with unobservable inputs (Level 3), primarily insurance contracts, using a crediting rate that approximates market returns and investments in underlying securities whose market values are unobservable and determined using pricing models, discounted cash flow methodologies, or similar techniques.

	Fair Value Measurements Using Significant Unobservable Inputs (Level 3)
	Other Investments[1]
(Dollars in millions)	**Non-U.S. Pension Plans**
Balance at December 31, 2017	$ 51
Unrealized gains	—
Balance at December 31, 2018	51
Unrealized gains	5
Purchases, issuances, sales, and settlements	1
Balance at December 31, 2019	$ 57

(1) Primarily consists of insurance contracts.

The following table reflects the target allocation for the Company's U.S. and non-U.S. pension and postretirement benefit plans assets for 2020 and the asset allocation at December 31, 2019 and 2018, by asset category.

	U.S. Pension Plans			Non-U.S. Pension Plans			Postretirement Benefit Plan		
	2020 Target Allocation	Plan Assets at December 31, 2019	Plan Assets at December 31, 2018	2020 Target Allocation	Plan Assets at December 31, 2019	Plan Assets at December 31, 2018	2020 Target Allocation	Plan Assets at December 31, 2019	Plan Assets at December 31, 2018
Asset category									
Equity securities	44%	50%	43%	24%	21%	19%	—%	—%	—%
Debt securities	39%	37%	44%	57%	53%	54%	100%	100%	100%
Real estate	2%	2%	2%	5%	8%	8%	—%	—%	—%
Other investments (1)	15%	11%	11%	14%	18%	19%	—%	—%	—%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

(1) U.S. primarily consists of private equity and natural resource and energy related limited partnership investments. Non-U.S. primarily consists of annuity contracts and alternative investments.

Investment Strategy

Eastman's investment strategy for its defined benefit pension plans is to maximize the long-term rate of return on plan assets within an acceptable level of risk in order to meet or exceed the plan's actuarially assumed long-term rate of return and to minimize the cost of providing pension benefits. A periodic asset/liability study is conducted in order to assist in the determination and, if necessary, modification of the appropriate long-term investment policy for the plan. The investment policy establishes a target allocation range for each asset class and the fund is managed within those ranges. The plans use a number of investment approaches including investments in equity, real estate, and fixed income funds in which the underlying securities are marketable in order to achieve this target allocation. The plans also invest in private equity and other funds. Diversification is created through investments across various asset classes, geographies, fund managers, and individual securities. This investment process is designed to provide for a well-diversified portfolio with no significant concentration of risk. The investment process is monitored by an investment committee that includes senior management.

Eastman's investment strategy for its VEBA trust is to invest in intermediate-term, well diversified, high quality investment instruments, with a primary objective of capital preservation.

The expected rate of return for all plans was determined primarily by modeling the expected long-term rates of return for the categories of investments held by the plans and the targeted allocation percentage against various potential economic scenarios.

The Company made no contributions to its U.S. defined benefit pension plans in 2019 or 2018. For 2020 calendar year, there are no minimum required cash contributions for the U.S. defined benefit pension plans under the Employee Retirement Income Security Act of 1974, as amended, and the Internal Revenue Code of 1986, as amended.

The estimated future benefit payments, reflecting expected future service, as appropriate, are as follows:

	Pension Plans		Postretirement Benefit Plans
(Dollars in millions)	U.S.	Non-U.S.	
2020	$ 197	$ 31	$ 57
2021	161	30	57
2022	156	31	53
2023	151	34	47
2024	151	38	47
2025-2029	686	210	223

11. LEASES AND OTHER COMMITMENTS

Leases

On January 1, 2019, Eastman adopted *ASU 2016-02 Leases* and related releases under the modified retrospective optional transition method such that prior period financial statements have not been adjusted to reflect the impact of the new standard. The new standard establishes two types of leases: finance and operating. Both types of leases have associated right-to-use assets and lease liabilities that have been valued at the present value of the lease payments and recognized on the Consolidated Statements of Financial Position which did not result in an impact to retained earnings. The discount rate used in the measurement of a right-to-use asset and lease liability is the rate implicit in the lease whenever that rate is readily determinable. If the rate implicit in the lease is not readily determinable, the collateralized incremental borrowing rate is used.

Upon adoption, the Company elected the practical expedient package wherein: expired or existing contracts were not reassessed as to whether these contracts are or contained a lease; expired or existing contracts were not reassessed for operating or financing classification; and initial direct costs for existing leases were not reassessed. The Company also elected the practical expedient not to assess whether existing or expired land easements that were not previously accounted for under the prior standard are or contain a lease. Lastly, the Company elected the accounting policy not to apply the recognition and measurement requirements to short-term leases with a term of 12 months or less that do not include a bargain purchase option.

The Company has operating leases, as a lessee, with customary terms that do not include: significant variable lease payments; significant reasonably certain extensions or options required to be included in the lease term; restrictions; or other covenants for real property, rolling stock, and machinery and equipment. Real property leases primarily consist of office space and rolling stock leases primarily for railcars and fleet vehicles. At December 31, 2019, operating right-to-use assets of $197 million are included as a part of "Other noncurrent assets" in the Consolidated Statements of Financial Position and includes $8 million of assets previously classified as lease intangibles. Operating lease liabilities are included as a part of "Payables and other current liabilities" and "Other long-term liabilities" in the Consolidated Statements of Financial Position.

As of December 31, 2019, maturities of operating lease liabilities is provided below:

(Dollars in millions)	Operating lease liabilities
2020	$ 62
2021	49
2022	38
2023	25
2024	14
2025 and beyond	30
Total lease payments	218
Less: amounts of lease payments representing interest	22
Present value of future lease payments	196
Less: current obligations under leases	55
Long-term lease obligations	$ 141

There have been no material changes to the future minimum lease payments as of December 31, 2018 as accounted for under the previous lease standard.

The Company has operating leases, primarily leases for railcars, with terms that require the Company to guarantee a portion of the residual value of the leased assets upon termination of the lease that will expire beginning in first quarter 2020. Residual guarantee payments that become probable and estimable are recognized as rent expense over the remaining life of the applicable lease. Management's current expectation is that the likelihood of material residual guarantee payments is remote.

Lease costs during the period and other information is provided below:

(Dollars in millions)	For year ended December 31, 2019
Lease costs:	
Operating lease costs	$ 70
Short-term lease costs	40
Sublease income	(2)
Total	$ 108
Other operating lease information:	
Cash paid for amounts included in the measurement of lease liabilities	$ 72
Right-to-use assets obtained in exchange for new lease liabilities	54
Weighted-average remaining lease term, in years	5
Weighted-average discount rate	4.0%

Debt and Other Commitments

Eastman's obligations are summarized in the following table.

(Dollars in millions)	Payments Due for						
Period	Debt Securities	Credit Facilities and Other	Interest Payable	Purchase Obligations	Operating Leases	Other Liabilities	Total
2020	$ —	$ 171	$ 173	$ 181	$ 62	$ 241	$ 828
2021	483	—	186	156	49	81	955
2022	741	—	175	102	38	87	1,143
2023	840	—	156	91	25	87	1,199
2024	240	—	137	100	14	89	580
2025 and beyond	3,307	—	1,414	1,967	30	1,106	7,824
Total	$ 5,611	$ 171	$ 2,241	$ 2,597	$ 218	$ 1,691	$ 12,529

Estimated future payments of debt securities assumes the repayment of principal upon stated maturity, and actual amounts and the timing of such payments may differ materially due to repayment or other changes in the terms of such debt prior to maturity.

Eastman had various purchase obligations at December 31, 2019 totaling approximately $2.6 billion over a period of approximately 30 years for materials, supplies, and energy incident to the ordinary conduct of business.

Amounts in other liabilities represent the current estimated cash payments required to be made by the Company primarily for pension and other postretirement benefits, environmental loss contingency reserves, accrued compensation benefits, uncertain tax liabilities, and commodity and foreign exchange hedging in the periods indicated. Due to uncertainties in the timing of the effective settlement of tax positions with respect to taxing authorities, management is unable to determine the timing of payments related to uncertain tax liabilities and these amounts are included in the "2025 and beyond" line item.

Guarantees and claims also arise during the ordinary course of business from relationships with customers, suppliers, joint venture partners, and other parties when the Company undertakes an obligation to guarantee the performance of others if specified triggering events occur. Non-performance under a contract could trigger an obligation of the Company. The Company's current other guarantees include guarantees relating to intellectual property, environmental matters, and other indemnifications and have arisen through the normal course of business. The ultimate effect on future financial results is not subject to reasonable estimation because considerable uncertainty exists as to the final outcome of these claims, if they were to occur. These other guarantees have terms up to 30 years with maximum potential future payments of approximately $35 million in the aggregate, with none of these guarantees being individually significant to the Company's operating results, financial position, or liquidity. Management's current expectation is that future payment or performance related to non-performance under other guarantees is remote.

12. ENVIRONMENTAL MATTERS AND ASSET RETIREMENT OBLIGATIONS

Certain Eastman manufacturing facilities generate hazardous and nonhazardous wastes, the treatment, storage, transportation, and disposal of which are regulated by various governmental agencies. In connection with the cleanup of various hazardous waste sites, the Company, along with many other entities, has been designated a potentially responsible party ("PRP") by the U.S. Environmental Protection Agency under the Comprehensive Environmental Response, Compensation and Liability Act, which potentially subjects PRPs to joint and several liability for certain cleanup costs. In addition, the Company will incur costs for environmental remediation and closure and post-closure under the federal Resource Conservation and Recovery Act. Reserves for environmental contingencies have been established in accordance with Eastman's policies described in Note 1, "Significant Accounting Policies". The resolution of uncertainties related to environmental matters may have a material adverse effect on the Company's consolidated results of operations in the period recognized. However, because of the availability of legal defenses, the Company's preliminary assessment of actions that may be required, and the extended period of time that the obligations are expected to be satisfied, management does not believe that the Company's liability for these environmental matters, individually or in the aggregate, will have a material adverse effect on the Company's future liquidity or financial condition. The Company's total reserve for environmental loss contingencies was $287 million and $296 million at December 31, 2019 and December 31, 2018, respectively.

Environmental Remediation and Environmental Asset Retirement Obligations

The Company's total environmental reserve that management believes to be probable and reasonably estimable for environmental contingencies, including remediation costs and asset retirement obligations, is included as part of "Payables and other current liabilities" and "Other long-term liabilities" in the Consolidated Statements of Financial Position as follows:

(Dollars in millions)	December 31,	
	2019	2018
Environmental contingent liabilities, current	$ 20	$ 25
Environmental contingent liabilities, long-term	267	271
Total	$ 287	$ 296

Environmental Remediation

Estimated future environmental expenditures for undiscounted remediation costs ranged from the best estimate or minimum of $260 million to the maximum of $487 million and from the best estimate or minimum of $271 million to the maximum of $508 million at December 31, 2019 and December 31, 2018, respectively. The best estimate or minimum estimated future environmental expenditures are considered to be probable and reasonably estimable and include the amounts recognized at both December 31, 2019 and December 31, 2018.

Costs of certain remediation projects included in the environmental reserve are subject to a cost-sharing arrangement with Monsanto Company ("Monsanto") under the provisions of the Amended and Restated Settlement Agreement effective February 28, 2008 (the "Effective Date"), into which Solutia entered with Monsanto upon its emergence from bankruptcy (the "Monsanto Settlement Agreement"). Under the provisions of the Monsanto Settlement Agreement, Solutia, which became a wholly-owned subsidiary of Eastman on July 2, 2012, shares responsibility with Monsanto for remediation at certain locations outside of the boundaries of plant sites in Anniston, Alabama and Sauget, Illinois (the "Shared Sites"). Solutia is responsible for the funding of environmental liabilities at the Shared Sites up to a total of $325 million from the Effective Date. If remediation costs for the Shared Sites exceed this amount, such costs will thereafter be shared equally between Solutia and Monsanto. Including payments by Solutia prior to its acquisition by Eastman, $99 million had been paid for costs at the Shared Sites as of December 31, 2019. As of December 31, 2019, an additional $197 million has been recognized for estimated future remediation costs at the Shared Sites, over a period of approximately 30 years.

Reserves for environmental remediation include liabilities expected to be paid within approximately 30 years. The amounts charged to pre-tax earnings for environmental remediation and related charges are included within "Cost of sales" in the Consolidated Statements of Earnings, Comprehensive Income and Retained Earnings. Changes in the reserves for environmental remediation liabilities for twelve months ended 2019 are summarized below:

(Dollars in millions)	Environmental Remediation Liabilities
Balance at December 31, 2017	$ 280
Changes in estimates recognized in earnings and other	7
Cash reductions	(16)
Balance at December 31, 2018	271
Changes in estimates recognized in earnings and other	4
Cash reductions	(15)
Balance at December 31, 2019	$ 260

Environmental Asset Retirement Obligations

An asset retirement obligation is an obligation for the retirement of a tangible long-lived asset that is incurred upon the acquisition, construction, development, or normal operation of that long-lived asset. Eastman recognizes asset retirement obligations in the period in which they are incurred if a reasonable estimate of fair value can be made. The asset retirement obligations are discounted to expected present value and subsequently adjusted for changes in fair value. The associated estimated asset retirement costs are capitalized as part of the carrying value of the long-lived assets and depreciated over their useful life. Environmental asset retirement obligations consist of primarily closure and post-closure costs. For sites that have environmental asset retirement obligations, the best estimate recognized to date for these environmental asset retirement obligation costs was $27 million and $25 million at December 31, 2019 and December 31, 2018, respectively.

Other

Environmental costs are capitalized if they extend the life of the related property, increase its capacity, or mitigate the possibility of future contamination. The cost of operating and maintaining environmental control facilities is charged to expense as incurred. Eastman's cash expenditures related to environmental protection and improvement were $244 million, $274 million, and $257 million in 2019, 2018, and 2017, respectively, and include operating costs associated with environmental protection equipment and facilities, engineering costs, and construction costs. The cash expenditures above include environmental capital expenditures of approximately $27 million, $44 million, and $38 million in 2019, 2018, and 2017, respectively.

The Company also has contractual asset retirement obligations not associated with environmental liabilities. Eastman's non-environmental asset retirement obligations are primarily associated with the future closure of leased manufacturing assets at Pace, Florida and Oulu, Finland. These recognized non-environmental asset retirement obligations were $48 million and $46 million at December 31, 2019 and December 31, 2018, respectively, and are included as part of "Other long-term liabilities" in the Consolidated Statements of Financial Position.

13. LEGAL MATTERS

From time to time, Eastman and its operations are parties to, or targets of, lawsuits, claims, investigations and proceedings, including product liability, personal injury, asbestos, patent and intellectual property, commercial, contract, environmental, antitrust, health and safety, and employment matters, which are handled and defended in the ordinary course of business. While the Company is unable to predict the outcome of these matters, it does not believe, based upon currently available facts, that the ultimate resolution of any such pending matters will have a material adverse effect on its overall financial condition, results of operations, or cash flows.

14. STOCKHOLDERS' EQUITY

A reconciliation of the changes in stockholders' equity for 2019, 2018, and 2017 is provided below:

(Dollars in millions)	Common Stock at Par Value	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Treasury Stock at Cost	Total Eastman Stockholders' Equity	Noncontrolling Interest	Total Equity
Balance at December 31, 2016	$ 2	$ 1,915	$ 5,721	$ (281)	$ (2,825)	$ 4,532	$ 76	$ 4,608
Net Earnings	—	—	1,384	—	—	1,384	4	1,388
Cash Dividends [1]	—	—	(303)	—	—	(303)	—	(303)
Other Comprehensive Income	—	—	—	72	—	72	—	72
Share-Based Compensation Expense [2]	—	52	—	—	—	52	—	52
Stock Option Exercises	—	22	—	—	—	22	—	22
Other	—	(6)	—	—	—	(6)	1	(5)
Share Repurchase	—	—	—	—	(350)	(350)	—	(350)
Distributions to noncontrolling interest	—	—	—	—	—	—	(4)	(4)
Balance at December 31, 2017	$ 2	$ 1,983	$ 6,802	$ (209)	$ (3,175)	$ 5,403	$ 77	$ 5,480
Cumulative Effect of Adoption of New Accounting Standards [3]	—	—	16	—	—	16	—	16
Net Earnings	—	—	1,080	—	—	1,080	4	1,084
Cash Dividends [1]	—	—	(325)	—	—	(325)	—	(325)
Other Comprehensive (Loss)	—	—	—	(36)	—	(36)	—	(36)
Share-Based Compensation Expense [2]	—	64	—	—	—	64	—	64
Stock Option Exercises	—	18	—	—	—	18	—	18
Other [4]	—	(17)	—	—	—	(17)	(1)	(18)
Share Repurchase	—	—	—	—	(400)	(400)	—	(400)
Distributions to noncontrolling interest	—	—	—	—	—	—	(5)	(5)
Balance at December 31, 2018	$ 2	$ 2,048	$ 7,573	$ (245)	$ (3,575)	$ 5,803	$ 75	$ 5,878
Cumulative Effect of Adoption of New Accounting Standards [5]	—	—	(20)	20	—	—	—	—
Net Earnings	—	—	759	—	—	759	3	762
Cash Dividends [1]	—	—	(347)	—	—	(347)	—	(347)
Other Comprehensive Income	—	—	—	11	—	11	—	11
Share-Based Compensation Expense [2]	—	59	—	—	—	59	—	59
Stock Option Exercises	—	9	—	—	—	9	—	9
Other [4]	—	(11)	—	—	—	(11)	—	(11)
Share Repurchase	—	—	—	—	(325)	(325)	—	(325)
Distributions to noncontrolling interest	—	—	—	—	—	—	(4)	(4)
Balance at December 31, 2019	$ 2	$ 2,105	$ 7,965	$ (214)	$ (3,900)	$ 5,958	$ 74	$ 6,032

(1) Cash dividends includes cash dividends paid and dividends declared, but unpaid.

(2) Share-based compensation expense is the fair value of share-based awards.

(3) On January 1, 2018, the Company adopted new accounting standards for revenue recognition and derivatives and hedging, which resulted in increases to beginning retained earnings of $53 million and $2 million, respectively. The Company also adopted a new accounting standard for income taxes, which resulted in a decrease to beginning retained earnings of $39 million.

(4) Additional paid-in capital includes value of shares withheld for employees' taxes on vesting of share-based compensation awards.

(5) On January 1, 2019, the Company adopted a new accounting standard for reporting comprehensive income, which resulted in a reclassification of stranded tax effects from the Tax Reform Act from AOCI to retained earnings. See Note 1, "Significant Accounting Policies", for additional information.

Eastman is authorized to issue 400 million shares of all classes of stock, of which 50 million may be preferred stock, par value $0.01 per share, and 350 million may be common stock, par value $0.01 per share. The Company declared dividends per share of $2.52 in 2019, $2.30 in 2018, and $2.09 in 2017.

The Company established a benefit security trust in 1997 to provide a degree of financial security for unfunded obligations under certain unfunded plans and contributed to the trust a warrant to purchase up to 6 million shares of common stock of the Company for par value. The warrant, which remains outstanding, is exercisable by the trustee if the Company does not meet certain funding obligations, which obligations would be triggered by certain occurrences, including a change in control or potential change in control, as defined, or failure by the Company to meet its payment obligations under certain covered unfunded plans. Such warrant is excluded from the computation of diluted EPS because the conditions upon which the warrant becomes exercisable have not been met.

The additions to paid-in capital in 2019, 2018, and 2017 are primarily for compensation expense of equity awards and employee stock option exercises.

In February 2014, the Company's Board of Directors authorized repurchase of up to $1 billion of the Company's outstanding common stock. The Company completed the $1 billion repurchase authorization in May 2018, acquiring a total of 12,215,950 shares. In February 2018, the Company's Board of Directors authorized the repurchase of up to $2 billion of the Company's outstanding common stock at such times, in such amounts, and on such terms, as determined by management to be in the best interest of the Company. As of December 31, 2019, a total of 6,753,164 shares have been repurchased under this authorization for a total of $573 million. During 2019, the Company repurchased 4,282,409 shares of common stock for a cost of approximately $325 million. During 2018, the Company repurchased 3,959,878 shares of common stock for a cost of approximately $400 million. During 2017, the Company repurchased 4,184,637 shares of common stock for a cost of approximately $350 million.

The Company's charitable foundation held 50,798 issued and outstanding shares of the Company's common stock at December 31, 2019, 2018, and 2017 which are included in treasury stock in the Consolidated Statements of Financial Position and excluded from calculations of diluted EPS.

The following table sets forth the computation of basic and diluted EPS:

	For years ended December 31,		
(In millions, except per share amounts)	2019	2018	2017
Numerator			
Net earnings attributable to Eastman	$ 759	$ 1,080	$ 1,384
Denominator			
Weighted average shares used for basic EPS	137.4	141.2	144.8
Dilutive effect of stock options and other award plans	1.1	1.7	1.3
Weighted average shares used for diluted EPS	138.5	142.9	146.1
EPS [(1)]			
Basic	$ 5.52	$ 7.65	$ 9.56
Diluted	$ 5.48	$ 7.56	$ 9.47

(1) EPS is calculated using whole dollars and shares.

Shares underlying stock options excluded from the 2019, 2018, and 2017 calculations of diluted EPS were 2,183,875, 619,706, and 204,978, respectively, because the grant price of these options was greater than the average market price of the Company's common stock and the effect of including them in the calculation of diluted EPS would have been antidilutive.

Shares of common stock issued, including shares held in treasury, are presented below:

	For years ended December 31,		
	2019	2018	2017
Balance at beginning of year	219,140,523	218,369,992	217,707,600
Issued for employee compensation and benefit plans	498,123	770,531	662,392
Balance at end of year	219,638,646	219,140,523	218,369,992

Accumulated Other Comprehensive Income (Loss)

(Dollars in millions)	Cumulative Translation Adjustment	Benefit Plans Unrecognized Prior Service Credits	Unrealized Gains (Losses) on Cash Flow Hedges	Unrealized Losses on Investments	Accumulated Other Comprehensive Income (Loss)
Balance at December 31, 2017	$ (296)	$ 136	$ (48)	$ (1)	$ (209)
Period change	(13)	(30)	7	—	(36)
Balance at December 31, 2018	(309)	106	(41)	(1)	(245)
Period change [(1)]	45	—	(14)	—	31
Balance at December 31, 2019	$ (264)	$ 106	$ (55)	$ (1)	$ (214)

[(1)] Benefit plans unrecognized prior service credits includes $29 million reclassification of stranded tax expense from AOCI to retained earnings and unrealized gains (losses) on derivative instruments includes $9 million reclassification of stranded tax benefit from AOCI to retained earnings. See Note 1, "Significant Accounting Policies", for additional information.

Amounts of other comprehensive income (loss) are presented net of applicable taxes. Eastman records deferred income taxes on the cumulative translation adjustment related to branch operations and income from other entities included in the Company's consolidated U.S. tax return. No deferred income taxes are recognized on the cumulative translation adjustment of other subsidiaries outside the United States, as the cumulative translation adjustment is considered to be a component of indefinitely invested, unremitted earnings of these foreign subsidiaries.

Components of total other comprehensive income (loss) recorded in the Consolidated Statements of Earnings, Comprehensive Income and Retained Earnings are presented below, before tax and net of tax effects:

	For years ended December 31,					
	2019		2018		2017	
(Dollars in millions)	Before Tax	Net of Tax	Before Tax	Net of Tax	Before Tax	Net of Tax
Change in cumulative translation adjustment	$ 45	$ 45	$ (13)	$ (13)	$ 85	$ 85
Defined benefit pension and other postretirement benefit plans:						
Amortization of unrecognized prior service credits included in net periodic costs	(39)	(29)	(40)	(30)	(43)	(27)
Derivatives and hedging:						
Unrealized gain (loss) during period	(27)	(20)	30	22	11	7
Reclassification adjustment for (gains) losses included in net income, net	20	15	(20)	(15)	11	7
Total other comprehensive income (loss)	$ (1)	$ 11	$ (43)	$ (36)	$ 64	$ 72

For additional information regarding the impact of reclassifications into earnings, refer to Note 9, "Derivative and Non-Derivative Financial Instruments", and Note 10, "Retirement Plans".

15. ASSET IMPAIRMENTS AND RESTRUCTURING CHARGES, NET

Components of asset impairments and restructuring charges, net, are presented below:

	For years ended December 31,		
(Dollars in millions)	2019	2018	2017
Asset impairments	$ 27	$ —	$ 1
Intangible asset and goodwill impairments	45	39	—
Severance charges	45	6	6
Site closure and restructuring charges	9	—	1
Total	$ 126	$ 45	$ 8

2019

In December 2019, management approved a plan to discontinue production of certain products at the Singapore manufacturing site by the end of 2020 resulting in an asset impairment charge of $27 million impacting the AFP and CI segments. As a result of the annual impairment test of goodwill, the Company recognized a $45 million goodwill impairment in the crop protection reporting unit (part of the AFP segment). Additionally, in 2019, as part of business improvement and cost reduction initiatives, the Company recognized restructuring charges of $45 million for severance and $5 million for related costs. Also included was an additional $4 million restructuring charge related to a capital project in the AFP segment that was discontinued in 2016.

2018

In 2018 asset impairments and restructuring charges, net consisted of restructuring charges of approximately $6 million for severance. As a result of the annual impairment test of goodwill, the Company recognized a $38 million goodwill impairment in the crop protection reporting unit (part of the AFP segment). Additionally, the Company recognized an intangible asset impairment of $1 million in the Advanced Materials ("AM") segment.

2017

In 2017 asset impairments and restructuring charges, net were $3 million of asset impairment and restructuring charges, including severance, in the AFP segment related to the closure of a facility in China and restructuring charges of approximately $5 million for severance.

Reconciliations of the beginning and ending restructuring liability amounts are as follows:

(Dollars in millions)	Balance at January 1, 2019	Provision/ Adjustments	Non-cash Reductions/ Additions	Cash Reductions	Balance at December 31, 2019
Non-cash charges	$ —	$ 72	$ (72)	$ —	$ —
Severance costs	6	45	—	(34)	17
Site closure & restructuring costs	8	9	1	(7)	11
Total	$ 14	$ 126	$ (71)	$ (41)	$ 28

(Dollars in millions)	Balance at January 1, 2018	Provision/ Adjustments	Non-cash Reductions/ Additions	Cash Reductions	Balance at December 31, 2018
Non-cash charges	$ —	$ 39	$ (39)	$ —	$ —
Severance costs	19	6	1	(20)	6
Site closure & restructuring costs	10	—	—	(2)	8
Total	$ 29	$ 45	$ (38)	$ (22)	$ 14

(Dollars in millions)	Balance at January 1, 2017	Provision/ Adjustments	Non-cash Reductions/ Additions	Cash Reductions	Balance at December 31, 2017
Non-cash charges	$ —	$ 1	$ (1)	$ —	$ —
Severance costs	42	6	—	(29)	19
Site closure & restructuring costs	13	1	1	(5)	10
Total	$ 55	$ 8	$ —	$ (34)	$ 29

Substantially all costs remaining for severance are expected to be applied to the reserves within one year.

16. OTHER (INCOME) CHARGES, NET

(Dollars in millions)	For years ended December 31, 2019	2018	2017
Foreign exchange transaction losses (gains), net [1]	$ 9	$ 12	$ 5
Currency transaction costs resulting from tax law changes and outside-U.S. entity reorganizations	—	13	—
(Income) loss from equity investments and other investment (gains) losses, net	(10)	(17)	(12)
Coal gasification incident property insurance	—	(65)	—
Cost of disposition of claims against discontinued Solutia operations	—	—	9
Gain from sale of business [2]	—	—	(3)
Other, net	4	4	5
Other (income) charges, net	$ 3	$ (53)	$ 4

(1) Net impact of revaluation of foreign entity assets and liabilities and effects of foreign exchange non-qualifying derivatives.
(2) Gain resulting from the sale of the formulated electronic cleaning solution business in the AFP segment in 2017.

17. SHARE-BASED COMPENSATION PLANS AND AWARDS

2017 Omnibus Stock Compensation Plan

Eastman's 2017 Omnibus Stock Compensation Plan ("2017 Omnibus Plan") was approved by stockholders at the May 4, 2017 Annual Meeting of Stockholders and shall remain in effect until its fifth anniversary. The 2017 Omnibus Plan authorizes the Compensation and Management Development Committee of the Board of Directors to grant awards, designate participants, determine the types and numbers of awards, determine the terms and conditions of awards and determine the form of award settlement. Under the 2017 Omnibus Plan, the aggregate number of shares reserved and available for issuance is 10 million, which consist of shares not previously authorized for issuance under any other plan. The number of shares covered by an award is counted against this share reserve as of the grant date of the award. Shares covered by full value awards (e.g. performance shares and restricted stock awards) are counted against the total number of shares available for issuance or delivery under the plan as 2.5 shares for every one share covered by the award. Any stock distributed pursuant to an award may consist of, in whole or in part, authorized and unissued stock, treasury stock, or stock purchased on the open market. Under the 2017 Omnibus Plan and previous plans, the forms of awards have included restricted stock and restricted stock units, stock options, stock appreciation rights ("SARs"), and performance shares. The 2017 Omnibus Plan is flexible as to the number of specific forms of awards, but provides that stock options and SARs are to be granted at an exercise price not less than 100 percent of the per share fair market value on the date of the grant.

Director Stock Compensation Subplan

Eastman's 2018 Director Stock Compensation Subplan ("Directors' Subplan"), a component of the 2017 Omnibus Plan, remains in effect until terminated by the Board of Directors or the earlier termination of the 2017 Omnibus Plan. The Directors' Subplan provides for structured awards of restricted shares to non-employee members of the Board of Directors. Restricted shares awarded under the Directors' Subplan are subject to the same terms and conditions of the 2017 Omnibus Plan. The Directors' Subplan does not constitute a separate source of shares for grant of equity awards and all shares awarded are part of the 10 million shares authorized under the 2017 Omnibus Plan. Shares of restricted stock are granted on the first day of a non-employee director's initial term of service and shares of restricted stock are granted each year to each non-employee director on the date of the annual meeting of stockholders.

It has been the Company's practice to issue new shares rather than treasury shares for equity awards for compensation plans, including the 2017 Omnibus Plan and the Directors' Subplan, that require settlement by the issuance of common stock and to withhold or accept back shares awarded to cover the related income tax obligations of employee participants. Shares of unrestricted common stock owned by non-employee directors are not eligible to be withheld or acquired to satisfy the withholding obligation related to their income taxes. Shares of unrestricted common stock owned by specified senior management level employees are accepted by the Company to pay the exercise price of stock options in accordance with the terms and conditions of their awards.

Compensation Expense

For 2019, 2018, and 2017, total share-based compensation expense (before tax) of approximately $59 million, $64 million, and $52 million, respectively, was recognized in "Selling, general and administrative expense" in the Consolidated Statements of Earnings, Comprehensive Income and Retained Earnings for all share-based awards of which approximately $9 million, $9 million, and $8 million, respectively, related to stock options. The compensation expense is recognized over the substantive vesting period, which may be a shorter time period than the stated vesting period for qualifying termination eligible employees as defined in the forms of award notice. Approximately $3 million for both 2019 and 2018 and $2 million for 2017 of stock option compensation expense was recognized each year due to qualifying termination eligibility preceding the requisite vesting period.

Stock Option Awards

Options have been granted on an annual basis by the Compensation and Management Development Committee of the Board of Directors under the 2017 Omnibus Plan and predecessor plans to employees. Option awards have an exercise price equal to the closing price of the Company's stock on the date of grant. The term of options is 10 years with vesting periods that vary up to three years. Vesting usually occurs ratably over the vesting period or at the end of the vesting period. The Company utilizes the Black Scholes Merton option valuation model which relies on certain assumptions to estimate an option's fair value.

The weighted average assumptions used in the determination of fair value for stock options awarded in 2019, 2018, and 2017 are provided in the table below:

Assumptions	2019	2018	2017
Expected volatility rate	19.80%	19.03%	20.45%
Expected dividend yield	2.51%	2.48%	2.64%
Average risk-free interest rate	2.44%	2.61%	1.91%
Expected term years	5.7	5.1	5.0

The volatility rate of grants is derived from historical Company common stock price volatility over the same time period as the expected term of each stock option award. The volatility rate is derived by mathematical formula utilizing the weekly high closing stock price data over the expected term.

The expected dividend yield is calculated using the Company's average of the last four quarterly dividend yields.

The average risk-free interest rate is derived from United States Department of Treasury published interest rates of daily yield curves for the same time period as the expected term.

The weighted average expected term reflects the analysis of historical share-based award transactions and includes option swap and reload grants which may have much shorter remaining expected terms than new option grants.

A summary of the activity of the Company's stock option awards for 2019, 2018, and 2017 is presented below:

	2019		2018		2017	
	Options	Weighted-Average Exercise Price	Options	Weighted-Average Exercise Price	Options	Weighted-Average Exercise Price
Outstanding at beginning of year	2,905,600	$ 79	2,614,100	$ 70	2,363,700	$ 61
Granted	786,000	81	619,700	104	745,800	80
Exercised	(135,700)	67	(323,000)	55	(489,300)	44
Cancelled, forfeited, or expired	(76,600)	88	(5,200)	78	(6,100)	74
Outstanding at end of year	3,479,300	$ 80	2,905,600	$ 79	2,614,100	$ 70
Options exercisable at year-end	2,077,600		1,606,800		1,335,500	
Available for grant at end of year	6,085,857		8,174,614		9,943,033	

The following table provides the remaining contractual term and weighted average exercise prices of stock options outstanding and exercisable at December 31, 2019:

	Options Outstanding			Options Exercisable	
Range of Exercise Prices	Number Outstanding at December 31, 2019	Weighted-Average Remaining Contractual Life (Years)	Weighted-Average Exercise Price	Number Exercisable at December 31, 2019	Weighted-Average Exercise Price
$38-$50	176,700	1.5	$ 39	176,700	$ 39
$51-$73	720,500	5.9	67	625,100	66
$74-$89	1,985,100	7.1	81	1,076,800	79
$90-$104	597,000	8.2	104	199,000 —	104
	3,479,300	6.8	$ 80	2,077,600	$ 74

The range of exercise prices of options outstanding at December 31, 2019 is approximately $38 to $104 per share. The aggregate intrinsic value of total options outstanding and total options exercisable at December 31, 2019 is $18 million and $17 million, respectively. Intrinsic value is the amount by which the closing market price of the stock at December 31, 2019 exceeds the exercise price of the option grants.

The weighted average remaining contractual life of all exercisable options at December 31, 2019 is 5.5 years.

The weighted average fair value of options granted during 2019, 2018, and 2017 was $13.12, $15.90, and $11.79, respectively. The total intrinsic value of options exercised during the years ended December 31, 2019, 2018, and 2017, was $2 million, $15 million, and $19 million, respectively. Cash proceeds received by the Company from option exercises totaled $9 million and the related tax benefit was de minimis for 2019. Cash proceeds received by the Company from option exercises and the related tax benefit totaled $18 million and $3 million, respectively, for 2018 and $22 million and $5 million, respectively, for 2017. The total fair value of shares vested during the years ended December 31, 2019, 2018, and 2017 was $8 million, $7 million, and $6 million, respectively.

A summary of the changes in the Company's nonvested options during the year ended December 31, 2019 is presented below:

Nonvested Options	Number of Options	Weighted-Average Grant Date Fair Value
Nonvested at January 1, 2019	1,298,800	$13.63
Granted	786,000	$13.12
Vested	(608,200)	$12.89
Cancelled, forfeited, or expired	(74,900)	$13.43
Nonvested options at December 31, 2019	1,401,700	$13.68

For nonvested options at December 31, 2019, approximately $5 million in compensation expense will be recognized over the next two years.

Other Share-Based Compensation Awards

In addition to stock option awards, Eastman has awarded long-term performance share awards, restricted stock awards, and SARs. The long-term performance share awards are based upon actual return on capital compared to a target return on capital and total stockholder return compared to a peer group ranking by total stockholder return over a three year performance period. The awards are valued using a Monte Carlo Simulation based model and vest pro-rata over the three year performance period. The number of long-term performance award target shares granted for the 2019-2021, 2018-2020, and 2017-2019 periods were 412 thousand, 310 thousand, and 357 thousand, respectively. The target shares granted are assumed to be 100 percent. At the end of the three-year performance period, the actual number of shares awarded can range from zero percent to 250 percent of the target shares granted based on the award notice. The number of restricted stock awards granted during 2019, 2018, and 2017 were 189 thousand, 160 thousand, and 172 thousand, respectively. The fair value of a restricted stock award is equal to the closing stock price of the Company's stock on the date of grant and normally vests over a period of three years. The recognized compensation expense before tax for these other share-based awards in the years ended December 31, 2019, 2018, and 2017 was approximately $50 million, $55 million, and $44 million, respectively. The unrecognized compensation expense before tax for these same type awards at December 31, 2019 was approximately $55 million and will be recognized primarily over a period of two years.

18. SUPPLEMENTAL CASH FLOW INFORMATION

Included in the line item "Other items, net" of the "Operating activities" section of the Consolidated Statements of Cash Flows are specific changes to certain balance sheet accounts as follows:

	For years ended December 31,		
(Dollars in millions)	2019	2018	2017
Current assets	$ (5)	$ (47)	$ 13
Other assets	15	43	29
Current liabilities	(82)	(38)	59
Long-term liabilities and equity	(17)	87	43
Total	$ (89)	$ 45	$ 144

The above changes included transactions such as accrued taxes, deferred taxes, environmental liabilities, monetized positions from raw material and energy, currency, and certain interest rate hedges, prepaid insurance, miscellaneous deferrals, value-added taxes, and other miscellaneous accruals.

Cash flows from derivative financial instruments accounted for as hedges are classified in the same category as the item being hedged.

Cash paid for interest and income taxes is as follows:

	For years ended December 31,		
(Dollars in millions)	2019	2018	2017
Interest, net of amounts capitalized	$ 235	$ 239	$ 263
Income taxes	217	202	97
Non-cash investing and financing activities:			
Outstanding trade payables related to capital expenditures	22	18	27
(Gain) loss from equity investments	(10)	(17)	(14)

19. SEGMENT AND REGIONAL SALES INFORMATION

The Company's products and operations are managed and reported in four operating segments: Additives & Functional Products ("AFP"), Advanced Materials ("AM"), Chemical Intermediates ("CI"), and Fibers.

Additives & Functional Products Segment

In the AFP segment, the Company manufactures chemicals for products in the transportation, consumables, building and construction, animal nutrition, crop protection, energy, personal and home care, and other markets.

The products the Company manufactures in the coatings and inks additives product line can be broadly classified as polymers and additives and solvents and include specialty coalescents, specialty solvents, paint additives, and specialty polymers. The adhesives resins product line consists of hydrocarbon and rosin resins. The tire additives product line includes insoluble sulfur rubber additives, antidegradant rubber additives, and performance resins. The care chemicals business consists of amine derivative-based building blocks for the production of flocculants and intermediates for surfactants. In the specialty fluids product line, the Company produces heat transfer and aviation fluids products. The animal nutrition business consists of organic acid-based solutions product lines. The crop protection business consists of metam-based soil fumigants, thiram and ziram-based fungicides, and plant growth regulator products.

	Percentage of Total Segment Sales		
Product Lines	**2019**	**2018**	**2017**
Coatings and Inks Additives	24%	23%	23%
Adhesives Resins	15%	16%	18%
Tire Additives	16%	17%	17%
Care Chemicals	18%	17%	17%
Specialty Fluids	14%	13%	13%
Animal Nutrition and Crop Protection	13%	14%	12%
Total	100%	100%	100%

	Percentage of Total Segment Sales		
Sales by Customer Location	**2019**	**2018**	**2017**
United States and Canada	37%	36%	35%
Asia Pacific	24%	24%	23%
Europe, Middle East, and Africa	33%	34%	36%
Latin America	6%	6%	6%
Total	100%	100%	100%

Advanced Materials Segment

In the AM segment, the Company produces and markets polymers, films, and plastics with differentiated performance properties for value-added end-uses in transportation, consumables, building and construction, durable goods, and health and wellness markets.

The specialty plastics product line consists of two primary products: copolyesters and cellulose esters. The advanced interlayers product line includes polyvinyl butyral sheet and specialty polyvinyl butyral intermediates. The performance films product line primarily consists of window film and protective film products for aftermarket applied films.

	Percentage of Total Segment Sales		
Product Lines	**2019**	**2018**	**2017**
Specialty Plastics	49%	49%	51%
Advanced Interlayers	32%	33%	33%
Performance Films	19%	18%	16%
Total	100%	100%	100%

	Percentage of Total Segment Sales		
Sales by Customer Location	**2019**	**2018**	**2017**
United States and Canada	34%	35%	36%
Asia Pacific	32%	33%	33%
Europe, Middle East, and Africa	28%	27%	26%
Latin America	6%	5%	5%
Total	100%	100%	100%

Chemical Intermediates Segment

The CI segment leverages large scale and vertical integration from the cellulose and acetyl, olefins, and alkylamines streams to support the Company's specialty operating segments with advantaged cost positions. The CI segment sells excess intermediates beyond the Company's internal specialty needs into markets such as industrial chemicals and processing, building and construction, health and wellness, and agrochemicals.

In the intermediates product line, the Company produces olefin derivatives, acetyl derivatives, ethylene, and commodity solvents. The plasticizers product line consists of a unique set of primary non-phthalate and phthalate plasticizers and a range of niche non-phthalate plasticizers. The functional amines product lines include methylamines and salts, and higher amines and solvents.

	Percentage of Total Segment Sales		
Product Lines	**2019**	**2018**	**2017**
Intermediates	59%	60%	64%
Plasticizers	21%	20%	19%
Functional Amines	20%	20%	17%
Total	100%	100%	100%

	Percentage of Total Segment Sales		
Sales by Customer Location	**2019**	**2018**	**2017**
United States and Canada	64%	64%	68%
Asia Pacific	14%	15%	14%
Europe, Middle East, and Africa	15%	15%	12%
Latin America	7%	6%	6%
Total	100%	100%	100%

Fibers Segment

In the Fibers segment, Eastman manufactures and sells cellulose acetate tow for use in filtration media, primarily cigarette filters. The acetyl chemicals product line consists of triacetin, cellulose acetate flake, and acetyl raw materials for other acetate fiber producers. The acetate yarn product line consists of natural (undyed) acetate and polyester yarn and solution-dyed acetate yarn for use in apparel, home furnishings, and industrial fabrics. The nonwovens product line consists primarily of the nonwovens innovation products previously reported in "Other".

	Percentage of Total Segment Sales		
Product Lines	**2019**	**2018**	**2017**
Acetate Tow	68%	69%	77%
Acetyl Chemical Products	15%	15%	15%
Acetate Yarn	12%	10%	8%
Nonwovens	5%	6%	—%
Total	100%	100%	100%

	Percentage of Total Segment Sales		
Sales by Customer Location	**2019**	**2018**	**2017**
United States and Canada	25%	26%	22%
Asia Pacific	32%	33%	37%
Europe, Middle East, and Africa	39%	37%	37%
Latin America	4%	4%	4%
Total	100%	100%	100%

Other

Sales revenue in the table below for "Other" in 2017 is primarily sales from the nonwovens innovation products. Beginning first quarter 2018, sales revenue and innovation costs from the nonwovens and textiles innovation products previously reported in "Other" are reported in the Fibers segment due to accelerating commercial progress of growth initiatives.

	For years ended December 31,		
(Dollars in millions)	2019	2018	2017
Sales by Segment			
Additives & Functional Products	$ 3,273	$ 3,647	$ 3,343
Advanced Materials	2,688	2,755	2,572
Chemical Intermediates	2,443	2,831	2,728
Fibers	869	918	852
Total Sales by Operating Segment	9,273	10,151	9,495
Other	—	—	54
Total Sales	$ 9,273	$ 10,151	$ 9,549

	For years ended December 31,		
(Dollars in millions)	2019	2018	2017
Earnings Before Interest and Taxes by Segment			
Additives & Functional Products	$ 496	$ 639	$ 653
Advanced Materials	517	509	483
Chemical Intermediates	170	308	255
Fibers	194	257	181
Total EBIT by Operating Segment	1,377	1,713	1,572
Other			
Growth initiatives and businesses not allocated to operating segments	(102)	(114)	(114)
Pension and other postretirement benefit plans income (expense), net not allocated to operating segments	(97)	(17)	93
Asset impairments and restructuring charges, net	(49)	(6)	(5)
Other income (charges), net not allocated to operating segments	(9)	(24)	(16)
Total EBIT	$ 1,120	$ 1,552	$ 1,530

	December 31,	
(Dollars in millions)	2019	2018
Assets by Segment [(1)]		
Additives & Functional Products	$ 6,387	$ 6,545
Advanced Materials	4,415	4,456
Chemical Intermediates	2,775	2,934
Fibers	1,014	978
Total Assets by Operating Segment	14,591	14,913
Corporate Assets	1,417	1,082
Total Assets	$ 16,008	$ 15,995

(1) The chief operating decision maker holds operating segment management accountable for accounts receivable, inventory, fixed assets, goodwill, and intangible assets.

(Dollars in millions)	For years ended December 31, 2019	2018	2017
Depreciation and Amortization Expense by Segment			
Additives & Functional Products	$ 218	$ 219	$ 213
Advanced Materials	172	169	164
Chemical Intermediates	150	151	148
Fibers	64	64	58
Total Depreciation and Amortization Expense by Operating Segment	604	603	583
Other	7	1	4
Total Depreciation and Amortization Expense	$ 611	$ 604	$ 587

(Dollars in millions)	For years ended December 31, 2019	2018	2017
Capital Expenditures by Segment			
Additives & Functional Products	$ 152	$ 150	$ 229
Advanced Materials	130	187	248
Chemical Intermediates	98	137	116
Fibers	42	50	52
Total Capital Expenditures by Operating Segment	422	524	645
Other	3	4	4
Total Capital Expenditures	$ 425	$ 528	$ 649

Sales are attributed to geographic areas based on customer location and long-lived assets are attributed to geographic areas based on asset location.

(Dollars in millions) **Geographic Information**	For years ended December 31, 2019	2018	2017
Sales			
United States	$ 3,720	$ 4,118	$ 3,999
All foreign countries	5,553	6,033	5,550
Total	$ 9,273	$ 10,151	$ 9,549

	December 31, 2019	2018	2017
Net properties			
United States	$ 4,178	$ 4,228	$ 4,203
All foreign countries	1,393	1,372	1,404
Total	$ 5,571	$ 5,600	$ 5,607

20. QUARTERLY SALES AND EARNINGS DATA – UNAUDITED

(Dollars in millions, except per share amounts)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2019				
Sales	$ 2,380	$ 2,363	$ 2,325	$ 2,205
Gross profit	574	589	574	497
Asset impairments and restructuring charges, net	32	18	2	74
Net earnings attributable to Eastman	209	258	266	26
Net earnings per share attributable to Eastman[(1)]				
Basic	$ 1.50	$ 1.87	$ 1.95	$ 0.19
Diluted	$ 1.49	$ 1.85	$ 1.93	$ 0.19

(1) Each quarter is calculated as a discrete period; the sum of the four quarters may not equal the calculated full year amount.

(Dollars in millions, except per share amounts)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2018				
Sales	$ 2,607	$ 2,621	$ 2,547	$ 2,376
Gross profit	581	704	728	466
Asset impairments and restructuring charges, net	2	4	—	39
Net earnings attributable to Eastman	290	344	412	34
Net earnings per share attributable to Eastman[(1)]				
Basic	$ 2.03	$ 2.42	$ 2.93	$ 0.25
Diluted	$ 2.00	$ 2.39	$ 2.89	$ 0.24

(1) Each quarter is calculated as a discrete period; the sum of the four quarters may not equal the calculated full year amount.

21. RESERVE ROLLFORWARDS

Valuation and Qualifying Accounts

(Dollars in millions)		Additions			
	Balance at January 1, 2019	Charges (Credits) to Cost and Expense	Other Accounts	Deductions	Balance at December 31, 2019
Reserve for:					
Doubtful accounts and returns	$ 11	$ —	$ —	$ —	$ 11
LIFO inventory	337	(89)	—	—	248
Non-environmental asset retirement obligations	46	2	—	—	48
Environmental contingencies	296	7	—	16	287
Deferred tax valuation allowance	487	(20)	(14)	—	453
	$ 1,177	$ (100)	$ (14)	$ 16	$ 1,047

(Dollars in millions)

	Balance at January 1, 2018	Additions: Charges (Credits) to Cost and Expense	Additions: Other Accounts	Deductions	Balance at December 31, 2018
Reserve for:					
Doubtful accounts and returns	$ 12	$ —	$ —	$ 1	$ 11
LIFO inventory	288	44	5	—	337
Non-environmental asset retirement obligations	49	(2)	—	1	46
Environmental contingencies	304	9	—	17	296
Deferred tax valuation allowance [1]	410	81	(4)	—	487
	$ 1,063	$ 132	$ 1	$ 19	$ 1,177

(Dollars in millions)

	Balance at January 1, 2017	Additions: Charges (Credits) to Cost and Expense	Additions: Other Accounts	Deductions	Balance at December 31, 2017
Reserve for:					
Doubtful accounts and returns	$ 10	$ 3	$ —	$ 1	$ 12
LIFO inventory	264	24	—	—	288
Non-environmental asset retirement obligations	46	2	1	—	49
Environmental contingencies	321	8	4	29	304
Deferred tax valuation allowance	278	126	6	—	410
	$ 919	$ 163	$ 11	$ 30	$ 1,063

[1] Revised from Note 21, "Reserve Rollforwards", to the Company's 2018 Annual Report on Form 10-K, which reported deferred tax valuation allowance as $466 million.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Eastman maintains a set of disclosure controls and procedures designed to ensure that information required to be disclosed by the Company in reports that it files or submits under the Securities Exchange Act of 1934 is recorded, processed, summarized, and reported within the time periods specified in Securities and Exchange Commission rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to provide reasonable assurance that information required to be disclosed by the Company in the reports that it files or submits under the Securities Exchange Act of 1934 is accumulated and communicated to the Company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. An evaluation was carried out under the supervision and with the participation of the Company's management, including the Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO"), of the effectiveness of the Company's disclosure controls and procedures. Based on that evaluation, the CEO and CFO have concluded that as of December 31, 2019, the Company's disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed was accumulated and communicated to management as appropriate to allow timely decisions regarding required disclosure.

Management necessarily applies its judgment in assessing the costs and benefits of such controls and procedures, which, by their nature, can provide only reasonable assurance regarding management's control objectives. Management, including the CEO and CFO, does not expect that the Company's disclosure controls and procedures can prevent all possible errors or fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance; judgments in decision-making can be faulty; and breakdowns can occur because of simple errors or mistakes. Additionally, controls can be circumvented by the individual acts of one or more persons. The design of any system of controls is based in part upon certain assumptions about the likelihood of future events, and while the Company's disclosure controls and procedures are designed to be effective under circumstances where they should reasonably be expected to operate effectively, there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Because of the inherent limitations in any control system, misstatements due to possible errors or fraud may occur and not be detected.

Management's Report on Internal Control Over Financial Reporting

Management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting. The Company's internal control over financial reporting is a process designed under the supervision of the Company's CEO and CFO to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the Company's financial statements for external purposes in accordance with U.S. generally accepted accounting principles.

The Company's internal control over financial reporting includes policies and procedures that:

- Pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect transactions and acquisitions and dispositions of assets of the Company;

- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and the directors of the Company; and

- Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the Company's financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management has assessed the effectiveness of its internal control over financial reporting as of December 31, 2019 based on the framework established in *Internal Control – Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this assessment, management has determined that the Company's internal control over financial reporting was effective as of December 31, 2019.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2019 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.

Changes in Internal Control Over Financial Reporting

There has been no change in the Company's internal control over financial reporting that occurred during the quarter ended December 31, 2019 that has materially affected, or is reasonably likely to materially effect, the Company's internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The material under the heading "Proposals to be Voted On at the Annual Meeting--Item 1--Election of Directors" to (but not including) the subheading "The Board of Directors and Corporate Governance" and under the subheading "Board Committees--Audit Committee" (except for the material under the subheading "Board Committees--Audit Committee--Audit Committee Report", which is not incorporated by reference herein), each as included and to be filed in the definitive Proxy Statement for the 2020 Annual Meeting of Stockholders (the "2020 Proxy Statement"), is incorporated by reference herein in response to this Item. Certain information concerning executive officers of Eastman is set forth under the heading "Information About our Executive Officers" in Part I of this Annual Report on Form 10-K (this "Annual Report").

The Company has adopted a Code of Ethics and Business Conduct applicable to the Chief Executive Officer, the Chief Financial Officer, and the Controller of the Company. The Company has posted such Code of Ethics and Business Conduct on its website (*www.eastman.com*) in the "Investors -- Corporate Governance" section.

ITEM 11. EXECUTIVE COMPENSATION

The material under the heading "Proposals to be Voted On at the Annual Meeting--Item 1--Election of Directors--Board Committees--Compensation and Management Development Committee--Compensation Committee Report", under the subheading "Director Compensation", and under the heading "Executive Compensation", each as included and to be filed in the 2020 Proxy Statement, is incorporated by reference herein in response to this Item.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The material under the headings "Stock Ownership of Directors and Executive Officers--Common Stock" and "Principal Stockholders" as included and to be filed in the 2020 Proxy Statement is incorporated by reference herein in response to this Item.

Securities Authorized for Issuance Under Equity Compensation Plans

Equity Compensation Plans Approved by Stockholders

Stockholders approved the Company's 2007 Omnibus Long-Term Compensation Plan, the 2012 Omnibus Stock Compensation Plan, and the 2017 Omnibus Stock Compensation Plan. Although stock and stock-based awards are still outstanding under the 2007 Omnibus Long-Term Compensation Plan and the 2012 Omnibus Stock Compensation Plan, no shares are available under these plans for future awards. All future share-based awards are made from the 2017 Omnibus Stock Compensation Plan and the 2018 Director Stock Compensation Subplan, a component of the 2017 Omnibus Stock Compensation Plan.

Equity Compensation Plans Not Approved by Stockholders

Stockholders have approved all compensation plans under which shares of Eastman common stock are authorized for issuance.

Summary Equity Compensation Plan Information Table

The following table sets forth certain information as of December 31, 2019 with respect to compensation plans under which shares of Eastman common stock may be issued.

Plan Category	Number of Securities to be Issued upon Exercise of Outstanding Options (a)	Weighted-Average Exercise Price of Outstanding Options (b)	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities reflected in Column (a)) (c)
Equity compensation plans approved by stockholders	3,479,300 [1]	$ 80	6,085,857 [2]
Equity compensation plans not approved by stockholders	—	—	—
TOTAL	3,479,300	$ 80	6,085,857

(1) Represents shares of common stock issuable upon exercise of outstanding options granted under Eastman Chemical Company's 2007 Omnibus Long-Term Compensation Plan, the 2012 Omnibus Stock Compensation Plan, and the 2017 Omnibus Stock Compensation Plan.

(2) Shares of common stock available for future awards under the Company's 2017 Omnibus Stock Compensation Plan, including the 2018 Director Stock Compensation Subplan, a component of the 2017 Omnibus Stock Compensation Plan.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The material under the heading "Proposals to be Voted On at the Annual Meeting--Item 1--Election of Directors", subheadings "Director Independence" and "Transactions with Directors, Executive Officers, and Related Persons", each as included and to be filed in the 2020 Proxy Statement, is incorporated by reference herein in response to this Item.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information concerning amounts billed for professional services rendered by the principal accountant and pre-approval of such services by the Audit Committee of the Company's Board of Directors under the heading "Item 3 - Ratification of Appointment of Independent Registered Public Accounting Firm" as included and to be filed in the 2020 Proxy Statement is incorporated by reference herein in response to this Item.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

ITEM 16. FORM 10-K SUMMARY

None.

EXHIBIT INDEX

Exhibit Number	Description
3.01	Amended and Restated Certificate of Incorporation of Eastman Chemical Company (incorporated herein by reference to Exhibit 3.01 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2012)
3.02	Amended and Restated Bylaws of Eastman Chemical Company (incorporated herein by reference to Exhibit 3.02 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2017)
4.01	Form of Eastman Chemical Company common stock certificate as amended February 1, 2001 (incorporated herein by reference to Exhibit 4.01 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2001)
4.02	Indenture, dated as of January 10, 1994, between Eastman Chemical Company and The Bank of New York, as Trustee (the "Indenture") (incorporated herein by reference to Exhibit 4(a) to the Company's Current Report on Form 8-K dated January 10, 1994)
4.03	Indenture, dated as of June 5, 2012, between Eastman Chemical Company and Wells Fargo Bank, as Trustee (incorporated herein by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K dated June 5, 2012)
4.04	Form of 7 1/4% Debentures due January 15, 2024 (incorporated herein by reference to Exhibit 4(d) to the Company's Current Report on Form 8-K dated January 10, 1994)
4.05	Officers' Certificate pursuant to Sections 201 and 301 of the Indenture related to 7 5/8% Debentures due 2024 (incorporated herein by reference to Exhibit 4(a) to the Company's Current Report on Form 8-K dated June 8, 1994)
4.06	Form of 7 5/8% Debentures due June 15, 2024 (incorporated herein by reference to Exhibit 4(b) to the Company's Current Report on Form 8-K dated June 8, 1994)
4.07	Form of 7.60% Debentures due February 1, 2027 (incorporated herein by reference to Exhibit 4.08 to the Company's Annual Report on Form 10-K for the year ended December 31, 1996)
4.08	Officer's Certificate pursuant to Sections 201 and 301 of the Indenture related to 7.60% Debentures due February 1, 2027 (incorporated herein by reference to Exhibit 4.09 to the Company's Annual Report on Form 10-K for the year ended December 31, 1996)
4.09	Form of 4.5% Note due 2021 (incorporated herein by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K dated December 10, 2010)
4.10	Form of 3.6% Note due 2022 (incorporated herein by reference to Exhibit 4.3 to the Company's Current Report on Form 8-K dated June 5, 2012)
4.11	Form of 4.8% Note due 2042 (incorporated herein by reference to Exhibit 4.4 to the Company's Current Report on Form 8-K dated June 5, 2012)
4.12	Form of 4.65% Note due 2044 (incorporated herein by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K dated May 15, 2014)
4.13	Form of 3.80% Note due 2025 (incorporated herein by reference to Exhibit 4.18 to the Company's Annual Report on Form 10-K for the year ended December 31, 2014)
4.14	Form of 1.50% Note due 2023 (incorporated herein by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K dated May 26, 2016 and Exhibit 1.1 to the Company's Current Report on Form 8-K dated November 21, 2016)
4.15	Form of 1.875% Note due 2026 (incorporated herein by reference to Exhibit 4.3 to the Company's Current Report on Form 8-K dated November 21, 2016)
4.16	Form of 3.5% Note due 2021 (incorporated herein by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K dated November 6, 2018)
4.17	Form of 4.5% Note due 2028 (incorporated herein by reference to Exhibit 4.3 to the Company's Current Report on Form 8-K dated November 6, 2018)
4.18*	Description of Securities

EXHIBIT INDEX

Exhibit Number	Description
10.01	Amended and Restated $250,000,000 Accounts Receivable Securitization Agreement dated July 9, 2008 (amended August 31, 2016, April 2, 2018, and June 27, 2019) between the Company and The Bank of Tokyo-Mitsubishi UFJ, Ltd., as agent (incorporated herein by reference to Exhibit 10.01 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2015, Exhibit 10.01 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2016, Exhibit 10.01 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018, and Exhibit 10.01 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019)
10.02	Amended and Restated Five-Year Credit Agreement dated as of October 25, 2018 among Eastman Chemical Company, the initial lenders named herein, and Citibank, N.A., as administrative agent, Citibank, N.A., JPMorgan Chase Bank, N.A. and Merrill Lynch, Pierce, Fenner & Smith Incorporate, as joint lead arrangers (incorporated herein by reference to Exhibit 10.01 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2018)
10.03	Amended and Restated Non-Recourse Account Receivable Purchase Agreement dated December 21, 2012 (amended March 28, 2013, July 30, 2013, March 22, 2016, December 16, 2016 and December 28, 2017) between BNP Paribas Fortis Factor N.V. and Taminco US LLC (incorporated herein by reference to Exhibit 10.01 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2016, Exhibit 10.36 to the Company's Annual Report on Form 10-K for the year ended December 31, 2016, and Exhibit 10.36 to the Company's Annual Report on Form 10-K for the year ended December 31, 2017)
10.04	Amended and Restated Non-Recourse Accounts Receivable Purchase Agreement dated October 31, 2012 (amended March 28, 2013, May 23, 2013, July 30, 2013, December 10, 2013, January 7, 2014, March 22, 2016, December 16, 2016, and December 28, 2017) between BNP Paribas Fortis Factor N.V. and Taminco B.V.B.A. (initial agreement incorporated herein by reference to Exhibit 10.8 to Taminco Corporation Amendment No. 1 to Registration Statement on Form S-1, File No. 333-185244, filed with the SEC January 18, 2013 and Exhibit 10.02 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2016, Exhibit 10.37 to the Company's Annual Report on Form 10-K for the year ended December 31, 2016, and Exhibit 10.37 to the Company's Annual Report on Form 10-K for the year ended December 31, 2017)
10.05	Non-Recourse Accounts Receivable Purchase agreement dated April 25, 2014 (amended May 13, 2014, November 21, 2014, March 22, 2016, December 16, 2016, and December 28, 2017) between BNP Parisbas Fortis Factor N.V. and Taminco Finland Oy (incorporated herein by reference to Exhibit 10.03 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2016, Exhibit 10.38 to the Company's Annual Report on Form 10-K for the year ended December 31, 2016, and Exhibit 10.35 to the Company's Annual Report on Form 10-K for the year ended December 31, 2017)
10.06	Eastman Excess Retirement Income Plan (incorporated herein by reference to Exhibit 10.02 to the Company's Annual Report on Form 10-K for the year ended December 31, 2008) **
10.07	Form of Executive Change in Control Severance Agreements (incorporated herein by reference to Exhibit 10.02 to the Company's Annual Report on Form 10-K for the year ended December 31, 2010) **
10.08	Eastman Unfunded Retirement Income Plan (incorporated herein by reference to Exhibit 10.04 to the Company's Annual Report on Form 10-K for the year ended December 31, 2008) **
10.09	Eastman Chemical Company Benefit Security Trust dated December 24, 1997, as amended May 1, 1998 and February 1, 2001 and Amendment Number Three to the Eastman Chemical Company Benefit Security Trust dated January 2, 2002 (incorporated herein by reference to Exhibit 10.01 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2001 and Exhibit 10.04 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2002) **
10.10	Amended and Restated Warrant to Purchase Shares of Common Stock of Eastman Chemical Company, dated January 2, 2002 (incorporated herein by reference to Exhibit 10.02 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2002) **
10.11	Amended and Restated Registration Rights Agreement, dated January 2, 2002 (incorporated herein by reference to Exhibit 10.03 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2002) **
10.12	Amended and Restated Eastman Executive Deferred Compensation Plan (incorporated herein by reference to Exhibit 10.13 to the Company's Annual Report on Form 10-K for the year ended December 31, 2014) **
10.13	Amended and Restated Eastman Directors' Deferred Compensation Plan (incorporated herein by reference to 10.04 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2016) **

EXHIBIT INDEX

Exhibit Number	Description
10.14	Eastman Unit Performance Plan as amended and restated effective December 5, 2012 (incorporated herein by reference to Exhibit 10.12 to the Company's Annual Report on Form 10-K for the year ended December 31, 2012) **
10.15	Form of Indemnification Agreements with Directors and Executive Officers (incorporated herein by reference to Exhibit 10.25 to the Company's Annual Report on Form 10-K for the year ended December 31, 2003) **
10.16	Forms of Award Notices for Stock Options Granted to Executive Officers under the 2007 Omnibus Long-Term Compensation Plan (incorporated herein by reference to Exhibits 10.01 and 10.02 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2010) **
10.17	2007 Omnibus Long-Term Compensation Plan (incorporated herein by reference to Exhibit 10.01 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2007) **
10.18	Forms of Performance Share Awards to Executive Officers (2017 – 2019 Performance Period) (incorporated herein by reference to Exhibit 10.23 to the Company's Annual Report on Form 10-K for the year ended December 31, 2016) **
10.19	Forms of Performance Share Awards to Executive Officers (2018 – 2020 Performance Period) (incorporated herein by reference to Exhibit 10.22 to the Company's Annual Report on Form 10-K for the year ended December 31, 2017) **
10.20	Forms of Performance Share Awards to Executive Officers (2019 – 2021 Performance Period) (incorporated herein by reference to Exhibit 10.01 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2019) **
10.21*	Forms of Performance Share Awards to Executive Officers (2020 - 2022 Performance Period) **
10.22	UPP performance measures and goals, specific target objectives with respect to such performance goals, the method for computing the amount of the UPP award allocated to the award pool if the performance goals are attained, and the eligibility criteria for employee participation in the UPP, for the 2018 performance year (incorporated herein by reference to the Company's Current Report on Form 8-K dated December 6, 2017) **
10.23	UPP performance measures and goals, specific target objectives with respect to such performance goals, the method for computing the amount of the UPP award allocated to the award pool if the performance goals are attained, and the eligibility criteria for employee participation in the UPP, for the 2019 performance year (incorporated herein by reference to the Company's Current Report on Form 8-K dated December 5, 2018) **
10.24	UPP performance measures and goals, specific target objectives with respect to such performance goals, the method for computing the amount of the UPP award allocated to the award pool if the performance goals are attained, and the eligibility criteria for employee participation in the UPP, for the 2020 performance year (incorporated herein by reference to the Company's Current Report on Form 8-K dated December 4, 2019) **
10.25	2012 Omnibus Stock Compensation Plan (incorporated herein by reference to Appendix A to the Company's 2012 Annual Meeting Proxy Statement dated March 21, 2012) **
10.26	2017 Omnibus Stock Compensation Plan (incorporated herein by reference to Appendix A of the Company's 2017 Annual Meeting Proxy Statement dated March 23, 2017) **
10.27	2018 Director Stock Compensation Subplan of the 2017 Omnibus Stock Compensation Plan and form of Restricted Stock Award Notice (incorporated herein by reference to Exhibit 10.28 to the Company's Annual Report on Form 10-K for the year ended December 31, 2018) **
10.28	Forms of Award Notices for Stock Options and Stock Appreciation Rights Granted to Executive Officers under the 2012 Omnibus Stock Compensation Plan (incorporated herein by reference to Exhibit 10.01 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2013, Exhibit 10.29 to the Company's Annual Report on Form 10-K for the year ended December 31, 2013, and Exhibit 10.01 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2016) **
10.29	Form of Award Notice for Stock Options and Restricted Stock Unit Awards Granted to Executive Officers under the 2017 Omnibus Stock Compensation Plan (incorporated by reference to Exhibit 10.31, Exhibit 10.33, and Exhibit 10.34 to the Company's Annual Report on Form 10-K for the year ended December 31, 2017) **

EXHIBIT INDEX

Exhibit Number	Description
10.30	Eastman Chemical Company Executive Incentive Pay Clawback Policy (incorporated herein by reference to Exhibit 10.01 to the Company's Current Report on Form 8-K dated February 3, 2015) **
10.31	Executive Retirement Agreement (incorporated herein by reference to Exhibit 10.02 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019) **
21.01*	Subsidiaries of the Company
23.01*	Consent of Independent Registered Public Accounting Firm
31.01*	Rule 13a – 14(a) Certification by Mark J. Costa, Chief Executive Officer, for the year ended December 31, 2019
31.02*	Rule 13a – 14(a) Certification by Curtis E. Espeland, Executive Vice President and Chief Financial Officer, for the year ended December 31, 2019
32.01*	Section 1350 Certification by Mark J. Costa, Chief Executive Officer, for the year ended December 31, 2019
32.02*	Section 1350 Certification by Curtis E. Espeland, Executive Vice President and Chief Financial Officer, for the year ended December 31, 2019
99.01*	2019 Company and Segment Revenue by End-Use Market
99.02*	Product and Raw Material Information
101.INS	Inline XBRL Instance Document (the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document)
101.SCH*	Inline XBRL Taxonomy Extension Schema
101.CAL*	Inline XBRL Taxonomy Calculation Linkbase
101.DEF*	Inline XBRL Definition Linkbase Document
101.LAB*	Inline XBRL Taxonomy Label Linkbase
101.PRE*	Inline XBRL Presentation Linkbase Document
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

* Denotes exhibit filed or furnished herewith.

** Management contract or compensatory plan or arrangement filed pursuant to Item 601(b) (10) (iii) of Regulation S-K.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

	Eastman Chemical Company
By:	/s/ Mark J. Costa
	Mark J. Costa
	Chief Executive Officer
Date: February 26, 2020	

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
PRINCIPAL EXECUTIVE OFFICER AND DIRECTOR:		
/s/ Mark J. Costa Mark J. Costa	Chief Executive Officer and Director	February 26, 2020
PRINCIPAL FINANCIAL OFFICER:		
/s/ Curtis E. Espeland Curtis E. Espeland	Executive Vice President and Chief Financial Officer	February 26, 2020
PRINCIPAL ACCOUNTING OFFICER:		
/s/ Scott V. King Scott V. King	Vice President, Corporate Controller and Chief Accounting Officer	February 26, 2020

SIGNATURE	TITLE	DATE
DIRECTORS* (other than Mark J. Costa, who also signed as Principal Executive Officer):		
/s/ Humberto P. Alfonso Humberto P. Alfonso	Director	February 26, 2020
/s/ Brett D. Begemann Brett D. Begemann	Director	February 26, 2020
/s/ Michael P. Connors Michael P. Connors	Director	February 26, 2020
/s/ Robert M. Hernandez Robert M. Hernandez	Director	February 26, 2020
/s/ Julie F. Holder Julie F. Holder	Director	February 26, 2020
/s/ Renée J. Hornbaker Renée J. Hornbaker	Director	February 26, 2020
/s/ Lewis M. Kling Lewis M. Kling	Director	February 26, 2020
/s/ Kim A. Mink Kim A. Mink	Director	February 26, 2020
/s/ James J. O'Brien James J. O'Brien	Director	February 26, 2020
/s/ David W. Raisbeck David W. Raisbeck	Director	February 26, 2020

* Edward L. Doheny II and Charles K. Stevens III were appointed to the Board of Directors in February 2020.

Exhibit 4.18

DESCRIPTION OF SECURITIES

As of December 31, 2019, Eastman Chemical Company (the "Company," "Eastman," "us," "we," or "our") has three classes of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"): (1) common stock; (2) 1.50% Notes due 2023 (the "2023 notes); and (3) 1.875% Notes due 2026 (the "2026 notes"). Unless the context indicates otherwise, all references to "notes" refers to the 2023 notes and the 2026 notes together.

DESCRIPTION OF COMMON STOCK

The following description of our common stock is a summary and does not purport to be complete. It is subject to and qualified in its entirety by reference to our Amended and Restated Certificate of Incorporation (the "Certificate of Incorporation") and our Amended and Restated Bylaws (the "Bylaws"), each of which are incorporated by reference as an exhibit to the Annual Report on Form 10-K of which this Exhibit 4.18 is a part. *See* our Certificate of Incorporation, our Bylaws, and the applicable provisions of the Delaware General Corporation Law ("DGCL") for additional information.

Authorized Capital Stock

Eastman is authorized to issue up to 400,000,000 shares of capital stock, of which 50,000,000 may be shares of preferred stock, par value $0.01 per share, and 350,000,000 may be shares of common stock, par value $0.01 per share. No shares of preferred stock have been issued by the Company.

Voting Rights

Holders of our common stock are entitled to one vote for each share on all matters voted on by our stockholders. Holders of our common stock do not have cumulative voting rights in the election of directors. Holders of our common stock do not have any preemptive right to subscribe for or purchase any of our securities of any class or kind.

Dividends

Subject to the preferences or other rights of any preferred stock that may be issued from time to time, holders of our common stock are entitled to participate ratably in dividends on our common stock as declared by our Board of Directors.

Liquidation Rights

Holders of our common stock are entitled to share ratably in all assets available for distribution to stockholders in the event of our liquidation or dissolution, subject to distribution of the preferential amount, if any, to be distributed to holders of our preferred stock.

Listing

Our shares of common stock are listed on the New York Stock Exchange ("NYSE") under the trading symbol "EMN."

Subscription, Redemption or Conversion Privileges

Holders of our common stock do not have any subscription, redemption or conversion privileges.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company.

Certain Provisions Affecting Control of the Company

General

Certain provisions of our Certificate of Incorporation, our Bylaws and the DGCL described in this section may delay or make more difficult acquisitions or changes of control of Eastman not approved by our Board of Directors. These provisions could have the effect of discouraging third parties from making proposals involving an acquisition or change of control of Eastman, although these kinds of proposals, if made, might be considered desirable by a majority of our stockholders. These provisions may also have the effect of making it more difficult for third parties to cause the replacement of our current management without the concurrence of our Board of Directors.

Number of Directors; Removal; Vacancies

Our Certificate of Incorporation and our Bylaws provide that the number of directors will be determined from time to time exclusively by a vote of a majority of our Board of Directors then in office. Our Certificate of Incorporation also provides that our Board of Directors has the exclusive right to fill vacancies, including vacancies created by expansion of our Board of Directors. This provision could have the effect of discouraging a potential acquiror from attempting to obtain control of Eastman. Our Certificate of Incorporation further provides that directors may be removed with or without cause by the affirmative vote of the holders of a majority of the voting power of all of the shares of our capital stock then entitled to vote generally in the election of directors. This provision, in conjunction with the provision authorizing our Board of Directors to fill vacant directorships, could prevent stockholders from removing certain incumbent directors and filling the resulting vacancies with their own nominees.

Election of Directors

Our Bylaws provide that directors are elected by the affirmative vote of a majority of the votes cast by stockholders, except as otherwise required by the DGCL or as provided for in our Certificate of Incorporation and our Bylaws. All directors are elected at each annual meeting of stockholders for terms expiring at the next annual meeting of stockholders and until such director’s successor shall be elected and qualified.

No Stockholder Action by Written Consent; Special Meetings

Our Certificate of Incorporation provides that stockholder action can be taken only at an annual or special meeting of stockholders and cannot be taken by written consent in lieu of a meeting. Our Certificate of Incorporation also provides that special meetings of the stockholders may be called only by our Board of Directors (i) pursuant to a resolution adopted by a majority of the members of our Board of Directors then in office, or (ii) upon the written request of the holders of at least 25% of our outstanding voting stock in accordance with the requirements set forth in our Bylaws. These provisions could delay a stockholder vote on certain matters, such as proposed business combinations or removal of directors, and could have the effect of discouraging a potential acquiror from making a tender offer for our securities.

Exhibit 4.18

Advance Notice for Stockholder Proposals and Director Nominations; Proxy Access

Our Bylaws establish an advance notice procedure for stockholder proposals to be brought before a meeting of stockholders and for nominations by our stockholders of candidates for election as directors at an annual meeting or a special meeting at which directors are to be elected. As described more fully in our Bylaws, only such business may be conducted at a meeting of stockholders as has been brought before the meeting by, or at the direction of, our Board of Directors, or by a stockholder who has given to the Company's Corporate Secretary timely written notice, in proper form, of the stockholder's intention to bring that business before the meeting. The presiding officer at a stockholders' meeting has the authority to make these determinations. Only persons who are nominated by, or at the direction of, our Board of Directors, or who are nominated by a stockholder who has given timely written notice, in proper form, to the Company's Corporate Secretary prior to a meeting at which directors are to be elected will be eligible for election as our directors. In addition to the director nomination process described above, our Bylaws permit one or more stockholders, who have owned continuously at least 3% of the voting power entitled to vote generally in the election of directors for at least three years, up to and including the date of the applicable annual meeting of stockholders, to include up to a specified number of director nominees in our proxy materials for an annual meeting of stockholders ("proxy access"). The maximum number of stockholder nominees permitted under the proxy access provisions of our Bylaws is 20% of the number of directors in office as of the last day on which a notice of proxy access nomination may be delivered. Stockholders must give timely written notice to the Company's Corporate Secretary, in proper form, to include director nominees in our proxy materials for an annual meeting of stockholders. With the exception of proxy access, these provisions could make it more difficult for stockholders to raise matters affecting control of Eastman, including tender offers for our securities, business combinations or the election or removal of directors, for a stockholder vote.

Amendment of the Certificate of Incorporation

Any proposal to amend, alter, change or repeal any provision of our Certificate of Incorporation requires approval by both a majority of the members of our Board of Directors then in office and a majority of the voting power of all of the shares of our capital stock entitled to vote generally in the election of directors. This provision, which is the minimum approval required under the DGCL, could make it more difficult for stockholders to amend, alter, change or repeal any provision of our Certificate of Incorporation, including a provision affecting control of Eastman.

Preferred Stock and Additional Common Stock

Under our Certificate of Incorporation, our Board of Directors has the authority to provide by board resolution for the issuance of shares of one or more classes or series of preferred stock. Our Board of Directors is authorized to fix by resolution the terms and conditions of each such other class or series. The authorized shares of our preferred stock, as well as authorized but unissued shares of our common stock, are available for issuance without further action by our stockholders, unless stockholder action is required by applicable law or the rules of the NYSE or any other stock exchange on which any class or series of our stock may then be listed. These provisions give our Board of Directors the power to approve the issuance of a class or series of our preferred stock, or additional shares of our common stock, that could, depending on the terms of the stock, either impede or facilitate the completion of a merger, tender offer or other takeover attempt. For example, the issuance of new shares might impede a business combination if the terms of those shares include voting rights which would enable a holder to block business combinations; alternatively, the issuance of new shares might facilitate a business combination if those shares have general voting rights sufficient to cause an applicable percentage vote requirement to be satisfied.

Constituency or Stakeholder Provision

In determining what is in our best interests and the best interests of our stockholders, our Certificate of Incorporation authorizes our Board of Directors in its discretion to consider, in addition to the long-term and short-term interests of the stockholders, the social and economic effects of the matter being considered on employees, customers, creditors and communities in which we operate. Further, in evaluating a potential business combination, our Board of Directors may also consider such matters as the business and financial condition of the acquiror, the competence, experience and integrity of the acquiror's management, and prospects for successful conclusion of the business combination. This provision gives our Board of Directors the authority to take into account factors other than the financial interests of the stockholders and could result in the rejection of a business combination or tender offer for our securities even if proposed at a price exceeding market value.

Delaware Business Combination Statute

Section 203 of the DGCL provides that, subject to specified exceptions, an “interested stockholder” of a Delaware corporation may not engage in any business combination with the corporation for a three-year period following the time that stockholder becomes an “interested stockholder” unless:

- prior to that time, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an “interested stockholder”;
- upon consummation of the transaction that resulted in the stockholder becoming an “interested stockholder,” the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced (excluding certain shares); or
- on or subsequent to that time, the business combination is approved by the board of directors of the corporation and authorized at an annual or special meeting of stockholders by the affirmative vote of at least 66 2/3% of the outstanding voting stock which is not owned by the “interested stockholder.”

Except as otherwise specified in Section 203 of the DGCL, an “interested stockholder” is defined to include (i) any person that is the owner of 15% or more of the outstanding voting stock of the corporation, or is an affiliate or associate of the corporation and was the owner of 15% or more of the outstanding voting stock of the corporation at any time within three years immediately prior to the relevant time and (ii) the affiliates and associates of any such person. A “business combination” includes mergers, asset sales or other transactions resulting in a financial benefit to the stockholder.

Under certain circumstances, Section 203 of the DGCL makes it more difficult for a person who would be an “interested stockholder” to effect various business combinations with a corporation for a three-year period, although the stockholders may elect to exclude a corporation from the restrictions imposed under Section 203 of the DGCL. Our Certificate of Incorporation does not exclude us from the restrictions imposed under Section 203 of the DGCL. The provisions of Section 203 of the DGCL may encourage companies interested in acquiring us to negotiate in advance with our Board of Directors, since the stockholder approval requirement would be avoided if a majority of the directors then in office approved either the business combination or the transaction that results in the stockholder becoming an interested stockholder. These provisions may discourage or make more difficult an attempt by a stockholder or other entity to acquire control of Eastman. These provisions also may have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

DESCRIPTION OF NOTES

We have previously filed a registration statement on Form S-3 (File No. 333-204119), which was filed with the Securities and Exchange Commission (the “SEC”) on May 13, 2015 and covers the issuance of the notes.

The following description of notes is a summary and does not purport to be complete. It is subject to and qualified in its entirety by reference to (1) the indenture, dated as of June 5, 2012, between us and Wells Fargo Bank, National Association, as trustee (the “indenture”), which is filed as an exhibit to the Form 8-K filed with the SEC on June 5, 2012, including the definitions of the terms used in the indenture and those terms made a part of the indenture by reference to the Trust Indenture Act of 1939, as amended (the “Trust Indenture Act”); (2) the form of note for the 2023 notes, which is filed as an exhibit to the Form 8-K filed with the SEC on May 26, 2016; and (3) the form of note for the 2026 notes, which is filed as an exhibit to the Form 8-K filed with the SEC on November 21, 2016.

General

The 2023 notes were issued in an aggregate initial principal amount of €550,000,000 and an aggregate additional principal amount of €200,000,000 and will mature on May 26, 2023. The initial and additional 2023 notes are treated as a single series and have the same terms (other than the date of issue and the initial price), including having the same ISIN, Common Code and CUSIP number. The 2026 notes were issued in an aggregate initial principal amount of €500,000,000 and will mature on November 23, 2026. The notes are issued only in book-entry form without coupons in minimum denominations of €100,000 and integral multiples of €1,000 in excess thereof. The notes are not entitled to any sinking funds. The notes are represented by one or more permanent global notes that are deposited with a common depositary and registered in the name of the nominee of the common depositary for the accounts of Euroclear and Clearstream. See "-Book-Entry Procedures; Global Clearance and Settlement."

The 2023 notes bear interest annually at a rate of 1.50% per annum, and interest on the 2023 notes accrues from May 26, 2016, or from the most recent date from which interest has been paid or provided for. The 2026 notes bear interest annually at a rate of 1.875% per annum from November 21, 2016, or from the most recent date from which interest has been paid or provided for. Interest is payable annually in arrears on May 26 of each year, beginning May 26, 2017, in the case of the 2023 notes and on November 23 of each year, beginning November 23, 2017, in the case of the 2026 notes, to the persons in whose names such notes are registered in the security register at the close of business on the May 11 preceding the relevant interest payment date, in the case of the 2023 notes, and on the November 8 preceding the relevant interest payment date, in the case of the 2026 notes, or if the notes are represented by one or more global notes, the close of business on the business day (for this purpose a day on which Clearstream and Euroclear are open for business) immediately preceding the relevant interest payment date; except that interest payable at maturity shall be paid to the same persons to whom principal of the notes is payable.

Interest payable on the applicable series of notes on any interest payment date, redemption date or maturity date is the amount of interest accrued from, and including, the next preceding interest payment date in respect of which interest has been paid or duly provided for (or from and including the original issue date of the notes, if no interest has been paid or duly provided for) to, but excluding, such interest payment date, redemption date or maturity date, as the case may be. This payment convention is referred to as ACTUAL/ACTUAL (ICMA) as defined in the rulebook of the International Capital Markets Association. If any interest payment date, maturity date or redemption date is not a business day, the payment otherwise required to be made on such date will be made on the next business day without any additional payment as a result of such delay. The rights of holders of beneficial interests of notes to receive the payments of interest on such notes are subject to the applicable procedures of Euroclear and Clearstream.

Unless otherwise indicated, the term "business day" means any day, other than a Saturday or Sunday, (i) which is not a day on which banking institutions in The City of New York or London are authorized or required by law or executive order to close and (ii) on which the Trans-European Automated Real-time Gross Settlement Express Transfer system, or the TARGET2 system, or any successor thereto, operates.

Listing

The 2023 notes are listed on NYSE under the symbol "EMN23." The 2026 notes are listed on NYSE under the symbol "EMN26."

Optional Redemption

We may redeem the notes, in whole or in part, in the case of the 2023 notes at any time prior to February 26, 2023 (three months prior to their maturity), and in the case of the 2026 notes at any time prior to August 23, 2026 (three months prior to their maturity), on at least 30 days', but not more than 60 days', prior notice mailed (or otherwise transmitted in accordance with the applicable procedures of Euroclear or Clearstream) to the registered address of each holder of the applicable series of notes, at a redemption price equal to the greater of:

- 100% of the principal amount of the applicable series of notes to be redeemed; or

- the sum of the present values of the Remaining Scheduled Payments (as defined below) of principal and interest on the applicable series of notes to be redeemed (not including any portion of such payments of interest accrued as of the date of redemption) discounted to the date of redemption on an annual basis (ACTUAL/ACTUAL (ICMA)) at the applicable Comparable Government Bond Rate (as defined below) plus 30 basis points with respect to the 2023 notes and 25 basis points with respect to the 2026 notes;

plus, in each case, accrued and unpaid interest to the redemption date.

In addition, we may redeem the notes, in whole or in part, at any time and from time to time, in the case of the 2023 notes, commencing on February 26, 2023 (three months prior to their maturity) and in the case of the 2026 notes, commencing on August 23, 2026 (three months prior to their maturity), on at least 30 days', but not more than 60 days', prior notice mailed (or otherwise transmitted in accordance with the applicable procedures of Euroclear or Clearstream) to the registered address of each holder of the applicable series of notes to be redeemed, at a redemption price equal to 100% of the principal amount of the applicable series of notes to be redeemed plus accrued and unpaid interest to the applicable redemption date.

If money sufficient to pay the redemption price of all of a series of the notes (or portions thereof) to be redeemed on the applicable redemption date is deposited with the trustee or paying agent on or before the applicable redemption date and certain other conditions are satisfied, then on and after such redemption date, interest will cease to accrue on such series of notes (or such portion thereof) called for redemption.

For purposes of the foregoing discussion of an optional redemption, the following definitions are applicable:

"Comparable Government Bond Rate" means the yield to maturity, expressed as a percentage (rounded to three decimal places, with 0.0005 being rounded upwards), on the third business day prior to the date fixed for redemption, of the Comparable Government Bond (as defined below) on the basis of the middle market price of the Comparable Government Bond prevailing at 11:00 a.m. (London time) on such business day as determined by an independent investment bank selected by us.

"Comparable Government Bond" means, in relation to any Comparable Government Bond Rate calculation, at the discretion of an independent investment bank selected by us, a German government bond whose maturity is closest to the maturity of the notes to be redeemed, or if such independent investment bank in its discretion determines that such similar bond is not in issue, such other German government bond as such independent investment bank may, with the advice of three brokers of, and/or market makers in, German government bonds selected by us, determine to be appropriate for determining the Comparable Government Bond Rate.

"Remaining Scheduled Payments" means, with respect to each note to be redeemed, the remaining scheduled payments of the principal thereof and interest thereon that would be due after the related redemption date but for such redemption; provided, however, that, if such redemption date is not an interest payment date with respect to such note, the amount of the next succeeding scheduled interest payment thereon will be deemed to be reduced (solely for the purposes of this calculation) by the amount of interest accrued thereon to such redemption date.

Unless we default in payment of the redemption price, on and after the redemption date, interest will cease to accrue on the applicable notes or portions thereof called for redemption. On or before the redemption date, we will deposit with the paying agent or set aside, segregate and hold in trust (if we are acting as paying agent), funds sufficient to pay the redemption price of, and accrued and unpaid interest on, such notes to be redeemed on that redemption date. If fewer than all of the notes of either series are to be redeemed, the trustee must select, not more than 60 days prior to the redemption date, the particular notes or portions thereof to be redeemed from the outstanding notes not previously called for redemption by such method as the trustee deems fair and appropriate; provided that if the notes are represented by one or more global notes, beneficial interests in the notes will be selected for redemption by Euroclear and Clearstream in accordance with their respective standard procedures therefor; provided, however, that no notes of a principal amount of €100,000 or less shall be redeemed in part.

We may at any time, and from time to time, purchase notes at any price or prices in the open market or otherwise.

Redemption for Tax Reasons

We may redeem the notes of either series at our option, in whole but not in part, at a redemption price equal to 100% of the principal amount of such series of notes, together with any accrued and unpaid interest on such series of notes to, but excluding, the date of redemption, at any time, if:

1) we have or will become obliged to pay Additional Amounts (as defined below) with respect to such series of notes as a result of any change in, or amendment to, the laws, regulations, treaties, or rulings of the United States ("U.S.") or any political subdivision of or in the U.S. or any taxing authority thereof or therein affecting taxation, or any change in, or amendment to, the application, official interpretation, administration or enforcement of such laws, regulations, treaties or rulings (including a holding by a court of competent jurisdiction in the U.S.), which change or amendment is enacted, adopted, announced or becomes effective on or after the date of the issuance of such series of notes; or

2) on or after the date of the issuance of a series of the notes, any action is taken by a taxing authority of, or any action has been brought in a court of competent jurisdiction in, the U.S. or any political subdivision of or in the U.S. or any taxing authority thereof or therein, including any of those actions specified in clause (1) above, whether or not such action was taken or brought with respect to us, or there is any change, amendment, clarification, application or interpretation of such laws, regulations, treaties or rulings, which in any such case, will result in a material probability that we will be required to pay Additional Amounts with respect to such series of notes (it being understood that such material probability will be deemed to result if the written opinion of independent tax counsel to such effect is delivered to the trustee and the paying agent).

Notice of any redemption will be mailed, or delivered electronically if a series of notes are held by any depositary (in accordance with such depositary's customary procedures), at least 30 days but not more than 60 days before the redemption date to each registered holder of the applicable series of notes; provided, however, that the notice of redemption shall not be given earlier than 90 days before the earliest date on which we would be obligated to pay such Additional Amounts if a payment in respect of a series of notes were then due.

Payment of Additional Amounts

All payments of principal and interest in respect of each series of notes are made free and clear of, and without deduction or withholding for or on account of, any present or future taxes, duties, assessments or other similar governmental charges required to be deducted or withheld by the U.S. or any political subdivision or taxing authority of or in the U.S. (collectively, "Taxes"), unless such withholding or deduction is required by law.

In the event any withholding or deduction for Taxes on payments in respect of either series of notes is required, we will, subject to the limitations described below, pay such additional amounts ("Additional Amounts") on the applicable series of notes as will result in receipt by each beneficial owner of a note that is not a U.S. Person (as defined below) of such amounts (after all such withholding or deduction), as would have been received by such beneficial owner had no such withholding or deduction been required. We will not be required, however, to make any payment of Additional Amounts for or on account of:

1) any Tax that would not have been imposed but for (1) the existence of any present or former connection (other than a connection arising solely from the ownership of those notes or the receipt of payments in respect of those notes) between a holder of a note (or the beneficial owner for whose benefit such holder holds such note), or between a fiduciary, settlor, beneficiary, member or shareholder or other equity owner of, or possessor of a power over, that holder or beneficial owner (if that holder or beneficial owner is an estate, trust, partnership, corporation or other entity) and the U.S., including that holder or beneficial owner, or that fiduciary, settlor, beneficiary, member, shareholder or possessor, being or having been a citizen or resident or treated as a resident of the U.S. or being or having been engaged in trade or business or present in the U.S. or having had a permanent establishment in the U.S., (2) the failure of a beneficial owner or holder of the notes to comply with any certification, information, documentation or other reporting requirements concerning the nationality, residence, identity or connections with the U.S. of the beneficial owner or holder of the notes that such beneficial owner or holder is legally able to comply with (including, but not limited to, the requirement to provide Internal Revenue Service Forms W-8BEN, W-8BEN-E, W-8ECI, or any subsequent versions thereof or successor thereto, and including, without limitation, any documentation requirement under an applicable income tax treaty) or (3) the presentation of a note for payment on a date more than 30 days after the later of the date on which that payment becomes due and payable and the date on which payment is duly provided for, except to the extent that the holder or beneficial owner would have been entitled to such Additional Amounts on presenting such note on any date during such 30-day period;

2) any estate, inheritance, gift, sales, transfer, capital gains, excise, personal property, wealth or similar Tax;

3) any Tax imposed by reason of the beneficial owner's past or present status as a passive foreign investment company with respect to the U.S., a controlled foreign corporation with respect to the U.S., a foreign tax exempt organization with respect to the U.S. or a personal holding company with respect to the U.S. or as a corporation that accumulates earnings to avoid U.S. federal income tax;

4) any Tax which is payable otherwise than by withholding or deducting from payment of principal of or premium, if any, or interest on the notes;

5) any Tax required to be withheld by any paying agent from any payment of principal of and premium, if any, or interest on any note if that payment can be made without withholding by any other paying agent;

6) any Tax imposed on interest received by (1) a 10-percent shareholder (as defined in Section 871(h)(3)(B) of the Code (as defined below), and the regulations that may be promulgated thereunder) of us, (2) a controlled foreign corporation that is related to us within the meaning of Section 864(d)(4) of the Code, or (3) a bank receiving interest described in Section 881(c)(3)(A) of the Code, to the extent such Tax would not have been imposed but for the beneficial owner's status as described in clauses (1) through (3) of this paragraph (6);

7) any Tax that would not have been imposed but for a change in law, regulation, or administrative or judicial interpretation that becomes effective more than 15 days after the payment becomes due or is duly provided for, whichever occurs later;

8) any Tax required to be withheld or deducted under Sections 1471 through 1474 of the Code or any amended or successor version of such Sections that is substantively comparable ("FATCA"), any regulations or other guidance thereunder, or any agreement (including any intergovernmental agreement) entered into in connection therewith; or any law, regulation or other official guidance enacted in any jurisdiction implementing FATCA or an intergovernmental agreement in respect of FATCA or

9) any combination of items (1), (2), (3), (4), (5), (6), (7) and (8);

nor will we pay any Additional Amounts to any beneficial owner or holder of notes who is a fiduciary or partnership to the extent that a beneficiary or settlor with respect to that fiduciary or a member of that partnership or a beneficial owner thereof would not have been entitled to the payment of those Additional Amounts had that beneficiary, settlor, member or beneficial owner been the beneficial owner of those notes.

As used in the preceding section, “U.S. Person” means any individual who is a citizen or resident of the U.S. for U.S. federal income tax purposes, a corporation, partnership or other entity created or organized in or under the laws of the U.S., any state of the U.S. or the District of Columbia (other than a partnership that is not treated as a U.S. Person under any applicable U.S. Treasury regulations), or any estate or trust the income of which is subject to U.S. federal income taxation regardless of its source.

Any reference in the terms of the notes to any amounts in respect of the notes shall be deemed also to refer to any Additional Amounts which may be payable under this provision.

Change of Control Triggering Event

Upon the occurrence of a Change of Control Triggering Event with respect to either series of notes, unless we have exercised our right to redeem the applicable series of notes as described under “-Optional Redemption” in accordance with the indenture, each holder of such notes will have the right to require us to purchase all or a portion (equal to €100,000 or any multiple of €1,000 in excess thereof) of such holder’s notes pursuant to the offer described below (the “Change of Control Offer”), at a purchase price equal to 101% of the principal amount thereof plus accrued and unpaid interest, if any, to, but excluding, the date of purchase (the “Change of Control Payment”), subject to the rights of holders of such notes on the relevant record date to receive interest due on the relevant interest payment date.

Within 30 days following the date upon which the Change of Control Triggering Event occurred with respect to either series of notes, or at our option, prior to any Change of Control but after the public announcement of the pending Change of Control, we will be required to send, by first class mail, a notice to each holder of such notes, with a copy to the trustee, which notice will govern the terms of the Change of Control Offer. Such notice will state, among other things, the purchase date, which must be no earlier than 30 days nor later than 60 days from the date such notice is mailed, other than as may be required by law (the “Change of Control Payment Date”). The notice, if mailed prior to the date of consummation of the Change of Control, will state that the Change of Control Offer is conditioned on the Change of Control being consummated on or prior to the Change of Control Payment Date.

On the Change of Control Payment Date, we will, to the extent lawful:

- accept or cause a third party to accept for payment all notes or portions of notes properly tendered pursuant to the Change of Control Offer;

- deposit or cause a third party to deposit with the paying agent an amount equal to the Change of Control Payment in respect of all notes or portions of notes properly tendered; and

- deliver or cause to be delivered to the trustee the notes properly accepted together with an officers’ certificate stating the aggregate principal amount of notes or portions of notes being repurchased and that all conditions precedent to the Change of Control Offer and to the repurchase by us of notes pursuant to the Change of Control Offer have been complied with.

The paying agent will be required to promptly mail to each holder who properly tendered such notes the purchase price for such debt securities, and the trustee will be required to promptly authenticate and mail (or cause to be transferred by book entry) to each such holder a new note equal in principal amount to any unpurchased portion of the notes surrendered, if any; provided that each new note will be in a principal amount of €100,000 or a multiple of €1,000 in excess thereof.

We will not be required to make a Change of Control Offer with respect to either series of notes if (i) a third party makes such an offer in the manner, at the times and otherwise in compliance with the requirements for such an offer otherwise required to be made by us and such third party purchases all such notes properly tendered and not withdrawn under its offer or (ii) a notice of redemption has been given to the holders of all such notes in accordance with the terms of the indenture, unless and until there is a default in payment of the redemption price. A Change of Control Offer may be made in advance of a Change of Control, conditional upon such Change of Control, if a definitive agreement is in place of the Change of Control at the time of making of the Change of Control Offer.

We will comply in all material respects with the requirements of Rule 14e-1 under the Exchange Act, and any other securities laws and regulations thereunder to the extent those laws and regulations are applicable in connection with the repurchase of the applicable series of notes as a result of a Change of Control Triggering Event. To the extent that the provisions of any such securities laws or regulations conflict with the Change of Control Offer provisions of the applicable series of notes, we will comply with those securities laws and regulations and will not be deemed to have breached our obligations under the Change of Control Offer provisions of the applicable series of notes by virtue of any such conflict.

For purposes of the foregoing discussion of a Change of Control Offer, the following definitions are applicable:

"Below Investment Grade Rating Event" means the notes of a series cease to be rated Investment Grade by each of the Rating Agencies on any date during the period (the "Trigger Period") commencing on the earlier of (a) the occurrence of a Change of Control and (b) the first public announcement by us of any Change of Control (or pending Change of Control) and ending 60 days following the consummation of such Change of Control (which Trigger Period will be extended if the rating of such series of notes is under publicly announced consideration for possible downgrade by any Rating Agency on such 60th day, such extension to last with respect to each Rating Agency until the date on which such Rating Agency considering such possible downgrade either (x) rates such series of notes below Investment Grade or (y) publicly announces that it is no longer considering such series of notes for possible downgrade; provided, that no such extension will occur if on such 60th day the notes of such series are rated Investment Grade not subject to review for possible downgrade by any Rating Agency); provided, that a rating event will not be deemed to have occurred in respect of a particular Change of Control (and thus will not be deemed a Below Investment Grade Rating Event for purposes of the definition of Change of Control Triggering Event) if each Rating Agency making the reduction in rating does not publicly announce or confirm or inform the trustee in writing at our request that the reduction was the result, in whole or in part, of any event or circumstance comprised of or arising as a result of, or in respect of, the Change of Control (whether or not the applicable Change of Control has occurred at the time of the Below Investment Grade Rating Event).

"Beneficial Owner" has the meaning assigned to such term in Rule 13d-3 and Rule 13d-5 under the Exchange Act, except that in calculating the beneficial ownership of any particular "person" as such term is used in Section 13(d)(3) of the Exchange Act, such "person" will be deemed to have beneficial ownership of all securities that such "person" has the right to acquire by conversion or exercise of other securities, whether such right is currently exercisable or is exercisable only upon the occurrence of a subsequent condition.

"Change of Control" means the occurrence of any of the following after the date of issuance of a series of notes:

- the direct or indirect sale, lease, transfer, conveyance or other disposition (other than by way of merger or consolidation), in one or a series of related transactions, of all or substantially all of the assets of the Company and its Subsidiaries taken as a whole to any "person" or "group" (as those terms are used in Section 13(d)(3) of the Exchange Act) other than to the Company or one of its Subsidiaries;

- the consummation of any transaction (including, without limitation, any merger or consolidation) the result of which is that any "person" or "group" (as those terms are used in Section 13(d)(3) of the Exchange Act, it being agreed that an employee of the Company or any of its Subsidiaries for whom shares are held under an employee stock ownership, employee retirement, employee savings or similar plan and whose shares are voted in accordance with the instructions of such employee shall not be a member of a "group" (as that term is used in Section 13(d)(3) of the Exchange Act) solely because such employee's shares are held by a trustee under said plan) becomes the ultimate Beneficial Owner, directly or indirectly, of our Voting Stock representing more than 50% of the voting power of our outstanding Voting Stock;

- we consolidate with, or merge with or into, any Person, or any Person consolidates with, or merges with or into, us, in any such event pursuant to a transaction in which any of our outstanding Voting Stock or Voting Stock of such other Person is converted into or exchanged for cash, securities or other property, other than any such transaction where our Voting Stock outstanding immediately prior to such transaction constitutes, or is converted into or exchanged for, Voting Stock representing more than 50% of the voting power of the Voting Stock of the surviving Person or its parent immediately after giving effect to such transaction; or

- during any period of 24 consecutive calendar months, the majority of the members of our Board of Directors shall no longer be composed of individuals (a) who were members of our Board of Directors on the first day of such period or (b) whose election or nomination to our Board of Directors was approved by individuals referred to in clause (a) above constituting, at the time of such election or nomination, at least a majority of our Board of Directors or, if directors are nominated by a committee of our Board of Directors, constituting at the time of such nomination, at least a majority of such committee.

Notwithstanding the foregoing, a transaction will not be deemed to involve a Change of Control if (i) we become a direct or indirect wholly-owned Subsidiary of a holding company and (ii) the direct or indirect holders of the Voting Stock of such holding company immediately following that transaction are substantially the same as the holders of our Voting Stock immediately prior to that transaction.

"Change of Control Triggering Event" means the occurrence of both a Change of Control and a Below Investment Grade Rating Event. Notwithstanding the foregoing, no Change of Control Triggering Event will be deemed to have occurred in connection with any particular Change of Control unless and until such Change of Control has actually been consummated.

"Investment Grade" means a rating of Baa3 or better by Moody's (or its equivalent under any successor rating category of Moody's) and a rating of BBB- or better by S&P (or its equivalent under any successor rating category of S&P), and the equivalent investment grade credit rating from any replacement rating agency or rating agencies selected by us under the circumstances permitting us to select a replacement agency and in the manner for selecting a replacement agency, in each case as set forth in the definition of "Rating Agency."

"Moody's" means Moody's Investors Service, Inc., a subsidiary of Moody's Corporation, and its successors.

"Rating Agency" means each of Moody's and S&P; provided, that if any of Moody's or S&P ceases to provide rating services to issuers or investors, we may appoint another "nationally recognized statistical rating organization" (as defined under the Exchange Act) as a replacement for such Rating Agency; provided, that we shall give written notice of such appointment to the trustee.

"S&P" means Standard & Poor's Ratings Services, a division of S&P Global Inc., and its successors.

"Voting Stock" of any specified Person as of any date means the capital stock (or comparable equity interests) of such Person that is at the time entitled to vote generally in the election of the board of directors (or members of the governing body) of such Person.

For purposes of the notes, the following definition is applicable:

"Person" means any individual, corporation, limited liability company, partnership, joint venture, association, joint stock company, trust, estate, unincorporated organization or government or any agency or political subdivision thereof or any other entity.

The definition of Change of Control includes a phrase relating to the direct or indirect sale, lease, transfer, conveyance or other disposition of "all or substantially all" of the properties or assets of Eastman and its Subsidiaries taken as a whole. Although there is a limited body of case law interpreting the phrase "substantially all," there is no precise, established definition of the phrase under applicable law. Accordingly, the applicability of the requirement that we offer to repurchase the notes as a result of a sale, lease, transfer, conveyance or other disposition of less than all of the assets of the Company and its Subsidiaries taken as a whole to another Person or group may be uncertain.

Certain Covenants

The indenture contains, among others, the following covenants:

Restrictions on Secured Debt

Under the indenture, we will not, and we will not permit any Restricted Subsidiary (as defined below) to, incur, issue, assume or guarantee any notes, bonds, debentures or other similar evidences of indebtedness for money borrowed ("Debt"), secured by pledge of, or mortgage or lien on, any Principal Property (as defined below) of the Company or any Restricted Subsidiary, or any shares of stock of or Debt of any Restricted Subsidiary (such pledges, mortgages and liens being called "Mortgage" or "Mortgages" and such debt secured by such Mortgages being called "Secured Debt"), without effectively providing that the notes of each series (together with, if we shall so determine, any other indebtedness of the Company or such Restricted Subsidiary then existing or thereafter created which is not subordinate to the notes) shall be secured equally and ratably with (or prior to) such Secured Debt, so long as such Secured Debt shall be so secured, unless after giving effect thereto, the aggregate amount of all such Secured Debt plus all Attributable Debt (as defined below) of the Company and our Restricted Subsidiaries in respect of any Sale and Leaseback Transaction (as defined below) would not exceed 10% of Consolidated Net Tangible Assets; provided, however, that this restriction shall not apply to, and there shall be excluded from Secured Debt in any computation under such restriction, indebtedness secured by:

- Mortgage on such property or shares of stock or Debt existing as of June 5, 2012;
- Mortgages securing only notes issued under the indenture;
- Mortgages on such property or shares of stock of or Debt of, any Person, which Mortgages are existing at the time (i) such Person became a Restricted Subsidiary, (ii) such Person is merged into or consolidated with the Company or any Subsidiary or (iii) we or a Subsidiary merges into or consolidates with such Person (in a transaction in which such Person becomes a Restricted Subsidiary), which Mortgage was not incurred in anticipation of such transaction and was outstanding prior to such transaction;
- Mortgages in favor of us or any Restricted Subsidiary;
- Mortgages in favor of any governmental body to secure progress, advance or other payments pursuant to any contract or provision of any statute;
- Mortgages on such property or shares of stock or Debt existing at the time of acquisition thereof (including acquisition through merger or consolidation);
- Mortgages on such property or shares of stock or Debt to secure the payment of all or any part of the purchase price or construction cost thereof or to secure any Debt incurred prior to, at the time of, or within 180 days after, the acquisition of such property or shares or Debt, the completion of any construction or the commencement of full operation, for the purpose of financing all or any part of the purchase price or construction cost thereof;
- Mortgages incurred in connection with a Sale and Leaseback Transaction (as defined below) satisfying the provisions under "-Limitations on Sale and Leaseback Transactions"; and
- any extension, renewal or replacement (or successive extensions, renewals or replacements), as a whole or in part, of any Mortgage referred to in the foregoing bullet points; provided that such extension, renewal or replacement Mortgage shall be limited to all or a part of the same such property or shares of stock or Debt that secured the Mortgage extended, renewed or replaced (plus improvements on such property).

Limitations on Sale and Leaseback Transactions

Under the indenture, we will not, and we will not permit any Restricted Subsidiary to, enter into any arrangement with any bank, insurance company or other lender or investor (not including us or any Restricted Subsidiary) or to which any such lender or investor is a party, providing for the leasing by us or a Restricted Subsidiary for a period, including renewals, in excess of three years of any Principal Property the ownership of which has been or is to be sold or transferred, more than 180 days after the completion of construction and commencement of full operation thereof, by us or such Restricted Subsidiary to such lender or investor or to any Person to whom funds have been or are to be advanced by such lender or investor on the security of such Principal Property (referred to as a "Sale and Leaseback Transaction") unless either:

- we or such Restricted Subsidiary could create Secured Debt pursuant to the provisions described under "-Restrictions on Secured Debt" on the Principal Property to be leased in an amount equal to the Attributable Debt with respect to such Sale and Leaseback Transaction without equally and ratably securing notes issued under the indenture; or

- (a) the net proceeds of the sale or transfer of the Principal Property leased pursuant to such Sale and Leaseback Transaction is at least equal to the fair market value of such Principal Property and (b) within 180 days after such sale or transfer shall have been made by us or by a Restricted Subsidiary, we apply an amount not less than the greater of (i) the net proceeds of the sale of the Principal Property leased pursuant to such arrangement or (ii) the fair market value of the Principal Property so leased at the time of entering into such arrangement (as evidenced by an officers' certificate) to the retirement of Funded Debt (as defined below) of the Company; provided that the amount to be applied to the retirement of Funded Debt of the Company shall be reduced by (x) the principal amount of notes issued under the indenture delivered within 180 days after such sale to the trustee for retirement and cancellation, and (y) the principal amount of Funded Debt other than notes issued under the indenture, voluntarily retired by us within 180 days after such sale. No retirement referred to in this bullet point may be effected by payment at maturity or pursuant to any mandatory sinking fund payment or mandatory prepayment provision.

Limitation on Mergers, Consolidation and Sales of Assets

The indenture provides that we may not consolidate or merge with or into, or sell, lease or convey all or substantially all of our assets in any one transaction or series of transactions to any other corporation, unless:

- the resulting, surviving or transferee Person is either the Company or is a corporation, partnership, trust or other entity organized under the laws of the U.S., any state therein or the District of Columbia and expressly assumes by supplemental indenture all of our obligations under the indenture and the notes of each series issued under the indenture; and

- immediately after giving effect to the transaction, with respect to each series of notes issued under the indenture, no Event of Default (as defined below) or event which with notice or lapse of time would be an Event of Default has occurred and is continuing.

The successor will be substituted for us in the indenture with the same effect as if it had been an original party to such indenture. Thereafter, the successor may exercise the rights and powers of the Company under the indenture.

Events of Default

With respect to the notes, each of the following is an Event of Default under the indenture:

- failure to pay principal of, or premium, if any, on the notes when due;

- failure to pay any interest on the notes when due, continued for 30 days;

- failure to perform any other covenant in the indenture, continued for 90 days after written notice has been given by the trustee, or the holders of at least 25% in aggregate principal amount of the outstanding notes of such series, as provided in the indenture; and

- certain events in bankruptcy, insolvency or reorganization.

If an Event of Default (other than an Event of Default described in the last bullet point above) with respect to the notes outstanding shall occur and be continuing, either the trustee or the holders of at least 25% in aggregate principal amount of the outstanding notes of such series by notice as provided in the indenture, may declare the principal amount of the notes of such series, and the interest accrued thereon, if any, to be due and payable immediately. If an Event of Default described in the last bullet point above with respect to the notes of such series at the time outstanding shall occur and is continuing, the principal amount of all the notes of such series, and the interest accrued thereon, if any, will automatically, and without any action by the trustee or any holder, become immediately due and payable, without any declaration or other act by the trustee or any holder. After any such acceleration, but before a judgment or decree based on acceleration, the holders of a majority in aggregate principal amount of all of the notes of each applicable series then outstanding affected thereby (treated as a single class) may, under certain circumstances, waive all defaults related to such series of notes (or with respect to all of the notes, as the case may be) and rescind and annul such acceleration and its consequences if the Company has paid or deposited with the trustee a sum sufficient to pay matured interest, principal due otherwise than by acceleration, overdue interest and certain other payments in accordance with the indenture, and all Events of Default in respect of such series of notes, other than the non-payment of accelerated principal have been cured or waived as provided in the indenture. For information as to waiver of defaults, see "-Modification and Waiver."

Subject to the provisions of the indenture relating to the duties of the trustee if an Event of Default occurs and is continuing, the trustee shall be under no obligation to exercise any of its rights and powers under the indenture at the request of any of the holders, unless such holder shall have offered to the trustee security and indemnity satisfactory to it against the cost, expenses and liabilities which might be incurred by it in compliance with such request or direction. Subject to such provisions for the indemnification of the trustee, the holders of a majority in aggregate principal amount of the outstanding notes will have the right, in accordance with applicable law and the provisions of the indenture, to direct the time, method and place of conducting any proceeding for any remedy available to the trustee, or exercising any trust or power conferred on the trustee with respect to the notes of that series.

No holder of the notes will have any right to institute any action or proceeding with respect to the indenture, or for the appointment of a receiver or a trustee, or for any other remedy thereunder, unless (i) such holder has previously given to the trustee written notice of a continuing Event of Default with respect to the notes of such series, (ii) the holders of at least 25% in aggregate principal amount of the outstanding notes of such series have made written request, and such holder or holders have offered reasonable indemnity, to the trustee to institute such proceeding as trustee and (iii) the trustee has failed to institute such proceeding, and has not received from the holders of a majority in aggregate principal amount of the outstanding notes of such series a direction inconsistent with such request, within 60 days after such notice, request and offer. However, such limitations do not apply to a suit instituted by a holder of either series of the notes for the enforcement of payment of the principal of, any premium, if any, or interest on such notes on or after the applicable due date specified in such notes.

We will be required to furnish to the trustee annually a statement by certain of our officers as to whether or not we, to the officers' knowledge, are in default in the performance or observance of any of the terms, provisions and conditions of the indenture and, if so, specifying all such known defaults.

Modification and Waiver

The indenture provides that we and the trustee may enter into supplemental indentures without the consent of the holders of the notes to:

- cure any ambiguity or correct any inconsistency in the indenture or any supplement thereto;
- secure the notes;
- evidence the assumption by a successor corporation of our obligations;
- add covenants for the protection of the holders of the notes;
- provide for the issuance of, and terms of, new notes as permitted under the indenture;

- provide for uncertificated notes or to comply with the provisions of any clearing system or requirements of the trustee relating to transfers or exchanges of the notes;
- comply with requirements of the SEC in order to effect or maintain the qualification of the indenture under the Trust Indenture Act of 1939, as amended;
- evidence and provide for the acceptance of appointment by a successor trustee;
- in the case of subordinated debt securities, make any change relating to subordination that would limit or terminate the benefits available to any holder of senior indebtedness, provided that such change is made in accordance with the provisions of such senior debt securities;
- add any guarantees with respect to the notes; and
- make any change that we may deem necessary or desirable, provided that such provisions do not materially adversely affect the legal rights of any holder of the notes of the applicable series.

The indenture provides that modifications and amendments of the indenture may be made by us and the trustee with the consent of the holders of not less than a majority in aggregate principal amount of all of the notes of each applicable series then outstanding affected by such modification or amendment (treated as a single class); provided, however, that no such modification or amendment may, without the consent of the holder of each outstanding debt security affected by the modification or amendment:

- change the stated maturity of the principal of the notes;
- reduce the principal amount or premium, if any, on the notes;
- reduce the rate or extend the time of payment of interest;
- reduce any amount payable on redemption;
- change the currency in which the principal, premium, if any, or interest is payable;
- impair the right to institute suit for the enforcement of any payment on the notes when due;
- reduce the percentage in principal amount of the notes outstanding whose consent is required for any modification of the indenture; or
- modify such amendment provisions, subject to certain exceptions.

The holders of not less than a majority in aggregate principal amount of all of the notes of each applicable series outstanding affected thereby (treated as a single class), by written notice to the trustee, may on behalf of the holders of all notes waive compliance by us with certain restrictive provisions of the indenture with respect to such series. The holders of a majority in aggregate principal amount of all of the notes of each applicable series outstanding affected thereby (treated as a single class) may on behalf of the holders of all notes waive any past default under the indenture, except a default in the payment of principal, premium or interest and certain covenants and provisions of the indenture which cannot be amended without the consent of the holder of each outstanding debt security of each series affected.

With respect to any notes, the consent or waiver, as the case may be, of holders of the notes of such series required or permitted under the indenture, as the case may be, if we so determine, may also be obtained from the holders of a majority in principal amount of the notes of that series.

The indenture provides that in determining whether the holders of the requisite principal amount of the outstanding notes have given any request, demand, authorization, direction, notice, consent, waiver or other action under the indenture as of any date, certain notes, including those for whose payment or redemption money has been deposited or set aside in trust for the holders and those that have been fully defeased pursuant to the indenture, which is described below in “-Discharge, Defeasance and Covenant Defeasance,” will not be deemed to be outstanding.

Except in certain limited circumstances, we will be entitled to set any day as a record date for the purpose of determining the holders of outstanding notes entitled to give any request, demand, authorization, direction, notice, consent, waiver or other action under the indenture, in the manner and subject to the limitations provided in the indenture. If a record date is set for any action to be taken by holders, such action may be taken only by persons who are holders of outstanding notes on the record date.

Discharge, Defeasance and Covenant Defeasance

The indenture provides that we may elect either:

- to defease and be discharged from any and all obligations with respect to all or any notes with certain limited exceptions described below (referred to as “Legal Defeasance”); or

- to be released from our obligations with respect to all or any notes under the restrictive covenants in the indenture and any related Events of Default (referred to as “Covenant Defeasance”).

In order to accomplish Legal Defeasance or Covenants Defeasance: (i) we must deposit with the trustee, in trust, cash in U.S. dollars and/or U.S. government obligations, in an amount sufficient to pay any installment of principal, premium, if any, and interest on the notes of such series on the applicable stated maturity or redemption date of the payments; (ii) we must deliver to the trustee an opinion of counsel (in the case of Legal Defeasance with respect to the notes of such series, based on a ruling of the Internal Revenue Service or a change in applicable federal income tax law occurring after the date of the indenture) to the effect that the holders of the notes will not recognize income, gain or loss for federal income tax purposes as a result of such Legal Defeasance or Covenant Defeasance, as the case may be, and that such holders will be subject to U.S. federal income tax on the same amounts, in the same manner and at the same times as would have been the case if the Legal Defeasance or Covenant Defeasance, as the case may be, with respect to such series of notes had not occurred; (iii) no default or Event of Default with respect to the notes of the applicable series will have happened or be continuing on the date of the deposit; and (iv) if certain other conditions are satisfied.

Obligations not discharged in a Legal Defeasance include those relating to (i) the rights of holders of the notes of such series to receive payments in respect of the principal of, premium, if any, and interest on such debt securities when such payments are due from the trust referred to above; (ii) our obligations with respect to the notes of such series concerning mutilated, destroyed, lost or stolen notes and the maintenance of an office or agency for payment and money for security payments held in trust; and (iii) the rights, powers, trusts, duties and immunities of the trustee, and our obligations in connection therewith.

In addition, subject to certain limitations and exceptions, we may satisfy and discharge our obligations under the indenture with respect to the notes of such series by (i) delivering to the trustee for cancellation all of the notes outstanding, or (ii) depositing with the trustee, in trust, no earlier than one year before the notes become due and payable, whether at stated maturity, or any redemption date, or otherwise, cash and/or U.S. government obligations sufficient to pay all of the outstanding notes and paying all other sums payable under the indenture by us.

Certain Definitions

“Attributable Debt” means, as to any lease in respect of a Sale and Leaseback Transaction under which any Person is at the time liable, at any date as of which the amount thereof is to be determined, the total net amount of rent required to be paid by such Person under such lease during the remaining term thereof (or, if earlier, the first date upon which such lease may be terminated without penalty), discounted from the respective due dates thereof to such date at the rate per annum borne by notes issued under the indenture, compounded annually. The net amount of rent required to be paid under any such lease for any such period shall be the aggregate amount of the rent payable by the lessee with respect to such period after excluding amounts required to be paid on account of maintenance and repairs, insurance, taxes, assessments, water rates and similar charges. Unless the Company elects to calculate the total amount of rent required to be paid through the first date upon which such lease may be terminated without penalty (if such a provision exists), in the case of any lease which is terminable by the lessee upon the payment of a penalty, such net amount shall also include the amount of such penalty, but no rent shall be considered as required to be paid under such lease subsequent to the first date upon which it may be so terminated.

"Consolidated Net Tangible Assets" means the aggregate amount of assets (less applicable reserves and other properly deductible items) after deducting therefrom (1) all current liabilities, except for (a) notes and loans payable, (b) current maturities of long-term debt and (c) current maturities of obligations under capital leases and (2) all goodwill, trade names, trademarks, patents, unamortized debt discount and expense and other like intangibles, all as set forth on the most recent balance sheet of the Company and its consolidated Subsidiaries and computed in accordance with generally accepted accounting principles in the U.S. as in effect from time to time.

"Funded Debt" means all indebtedness for money borrowed having a maturity of more than 12 months from the date of the most recent balance sheet of the Company and its consolidated Subsidiaries or having a maturity of less than 12 months but by its terms being renewable or extendible beyond 12 months from the date of such balance sheet at the option of the borrower.

"Principal Property" means any single parcel of real estate, any single manufacturing plant or any single warehouse owned or leased in connection with a Sale and Leaseback Transaction by the Company or any Subsidiary which is located within the U.S. and the net book value of which on the date as of which the determination is being made exceeds 1% of Consolidated Net Tangible Assets, other than any such manufacturing plant or warehouse or portion thereof (1) which is a pollution control or other facility financed by obligations issued by a state or local government unit and described in Sections 141(a), 142(a)(5), 142(a)(6), 142(a)(10) or 144(a) of the Internal Revenue Code (or their successor provisions) or by any other obligations the interest of which is excluded under Section 103 of the Internal Revenue Code (or its successor provision), or (2) which, in the good-faith opinion of the Board of Directors, as evidenced by a board resolution, is not of material importance to the total business conducted by the Company and its Subsidiaries taken as a whole.

"Restricted Subsidiary" means a wholly-owned Subsidiary of the Company substantially all of the assets of which are located in the U.S. (excluding territories or possessions) and which owns a Principal Property; provided, however, that the term Restricted Subsidiary shall not include any Subsidiary that is principally engaged in (1) the business of financing; (2) the business of owning, buying, selling, leasing, dealing in or developing real property; or (3) the business of exporting goods or merchandise from or importing goods or merchandise into the U.S.

"Subsidiary" means a corporation more than 50% of the outstanding Voting Stock (as defined above) of which is owned, directly or indirectly, by the Company or by one or more other Subsidiaries, or by the Company and one or more other Subsidiaries.

Issuance in Euros

All payments of interest and principal, including payments made upon any redemption of the notes, are payable in euros. If the euro is unavailable to us due to the imposition of exchange controls or other circumstances beyond our control or if the euro is no longer being used by the then member states of the European Union that have adopted the euro as their currency or for the settlement of transactions by public institutions of or within the international banking community, then all payments in respect of the notes will be made in U.S. dollars until the euro is again available to us or so used. The amount payable on any date in euros will be converted into U.S. dollars on the basis of the most recently available market exchange rate for the euro. Any payment in respect of the notes so made in U.S. dollars will not constitute an event of default under the notes or the indenture. Neither the trustee nor the paying agent shall have any responsibility for any calculation or conversion in connection with the foregoing.

As used above, "market exchange rate" means the noon buying rate in The City of New York for cable transfers of euros as certified for customs purposes (or, if not so certified, as otherwise determined) by the U.S. Federal Reserve Board.

Investors are subject to foreign currency exchange risks as to payments of principal and interest that may have important economic and tax consequences to them.

Issuance of Additional Notes

The indenture provides that we may, without the consent of the holders of the notes, increase the principal amount of notes of that series by issuing additional notes of such series in the future on the same terms and conditions, except for any differences in the issue date, price to the public, interest accrued prior to the issue date of such additional notes, and the initial interest payment date, and with the same CUSIP, ISIN or Common Code numbers as the applicable series of notes, provided that if such additional notes are not fungible for U.S. federal income tax purposes, such notes will have a different CUSIP, ISIN or Common Code numbers than the applicable series of notes. The notes and any additional notes of such series would rank equally and ratably and would be treated as a single class for all purposes under the indenture. No additional notes may be issued if any Event of Default has occurred and is continuing with respect to such series of notes.

Ranking

The notes are our unsecured unsubordinated obligations and rank on a parity in right of payment with all our other unsecured and unsubordinated debt for borrowed money. The notes are effectively subordinated to any of our future secured debt to the extent of the value of the assets securing such debt.

The notes are not guaranteed by any of our Subsidiaries and will therefore be structurally subordinated to all existing and future debt and other obligations, including trade payables, of our Subsidiaries.

The indenture does not limit the incurrence by us or our Subsidiaries of other unsecured debt and does not limit the incurrence of secured debt by our Subsidiaries which are not Restricted Subsidiaries. The indenture and the terms of the notes will not contain any covenants (other than those described herein) designed to afford holders of any notes protection in a highly leveraged or other transaction involving us that may adversely affect holders of the notes.

Concerning the Trustee

Wells Fargo Bank, National Association is the trustee under the indenture. We may, from time to time, borrow from or maintain deposit accounts and conduct other banking transactions with the trustee or its affiliates in the ordinary course of business.

Governing Law

The indenture and the notes are governed by and construed in accordance with the internal laws of the State of New York.

Book-Entry Procedures

We have obtained the information in this section concerning Clearstream and Euroclear and their book-entry systems and procedures from sources that we believe to be reliable. We take no responsibility for an accurate portrayal of this information. In addition, the description of the clearing systems in this section reflects our understanding of the rules and procedures of Clearstream and Euroclear as they are currently in effect. Those clearing systems could change their rules and procedures at any time.

Global Clearance and Settlement

The notes were issued in the form of one or more global notes (the “Euro Global Notes”) in fully registered form, without coupons, and were deposited with, or on behalf of, a common depositary, and registered in the name of the nominee of the common depositary, for, and in respect of interests held through, Euroclear and Clearstream. Except as described herein, certificates were not issued in exchange for beneficial interests in the Euro Global Notes.

Except as set forth below, the Euro Global Notes may be transferred, in whole and not in part, only to Euroclear or Clearstream or their respective nominees.

Beneficial interests in the Euro Global Notes will be represented, and transfers of such beneficial interests will be effected, through accounts of financial institutions acting on behalf of beneficial owners as direct or indirect participants in Euroclear or Clearstream. Those beneficial interests are in denominations of €100,000 and integral multiples of €1,000 in excess thereof. Investors may hold the notes of either series directly through Euroclear or Clearstream, if they are participants in such systems, or indirectly through organizations that are participants in such systems. It is possible that the clearing systems may process trades that could result in amounts being held in denominations smaller than the minimum denominations. If definitive notes of a series are required to be issued in relation to such notes in accordance with the provisions of the relevant Euro Global Notes, a holder who does not have the minimum denomination or a multiple of €1,000 in excess thereof in its account with the relevant clearing system at the relevant time may not receive all of its entitlement in the form of definitive notes of such series unless and until such time as its holding satisfies the minimum denomination requirement.

So long as Euroclear or Clearstream or the nominee of their common depositary is the registered holder of the Euro Global Notes, Euroclear, Clearstream or such nominee, as the case may be, will be considered the sole owner or holder of the notes represented by such Euro Global Notes for all purposes under the indenture and the notes. Payments of principal, interest and premium and additional amounts, if any, in respect of the Euro Global Notes will be made to Euroclear, Clearstream or such nominee, as the case may be, as registered holder thereof.

Certificated Notes

Subject to certain conditions, the notes represented by the Euro Global Notes are exchangeable for certificated notes in definitive form of like tenor in minimum denominations of €100,000 principal amount and integral multiples of €1,000 in excess thereof if:

- the common depositary provides notification that it is unwilling, unable or no longer qualified to continue as depositary for the Euro Global Notes and a successor is not appointed within 90 days;

- we in our discretion at any time determine not to have all of the notes represented by the Euro Global Notes; or

- a default entitling the holders of the applicable notes to accelerate the maturity thereof has occurred and is continuing.

Any note that is exchangeable as above is exchangeable for certificated notes issuable in authorized denominations and registered in such names as the common depositary shall direct. Subject to the foregoing, a Euro Global Note is not exchangeable, except for a global note of the same aggregate denomination to be registered in the name of the common depositary (or its nominee).

Same-Day Payment

Payments (including principal, premium and additional amounts, if any, and interest) and transfers with respect to notes in certificated form may be executed at the office or agency maintained for such purpose in London (initially the corporate trust office of the paying agent) or, at our option, by check mailed to the holders thereof at the respective addresses set forth in the register of holders of the notes (maintained by the registrar), provided that all payments (including principal, premium and additional amounts, if any, and interest) on notes in certificated form, for which the holders thereof have given wire transfer instructions, will be required to be made by wire transfer of immediately available funds to the accounts specified by the holders thereof. No service charge will be made for any registration of transfer, but payment of a sum sufficient to cover any tax or governmental charge payable in connection with that registration may be required.

Exhibit 10.21

EASTMAN CHEMICAL COMPANY
PERFORMANCE SHARE AWARD SUBPLAN
OF THE 2017 OMNIBUS STOCK COMPENSATION PLAN
2020-2022 PERFORMANCE PERIOD

Section 1. Background. Under Article 4 of the Eastman Chemical Company 2017 Omnibus Stock Compensation Plan (the "Plan"), the "Committee" (as defined in the Plan), may, among other things, award shares of the $.01 par value common stock ("Common Stock") of Eastman Chemical Company (the "Company") to "Participants" (as defined in the Plan), and such awards may take the form of "Performance Awards" (as defined in the Plan) which are contingent upon the attainment of certain performance objectives during a specified period, and subject to such other terms, conditions, and restrictions as the Committee deems appropriate. The purpose of this Performance Share Award Subplan (this "Subplan") is to set forth the terms of the Performance Awards to be awarded for the 2020-2022 Performance Period specified herein, effective as of January 1, 2020 (the "Effective Date").

Section 2. Definitions.

(a) The following definitions shall apply to this Subplan:

(i) "Actual Grant Amount" means the number of shares of Common Stock to which a participant is entitled under a Performance Award, calculated in accordance with Section 6 of this Subplan.

(ii) "Award Amount" means the number of shares of Common Stock subject to the Performance Award granted to the Participant under this Subplan at the beginning of the Performance Period.

(iii) "Award Payment Date" means the date the Committee approves the payout of Common Stock covered by an award under this Subplan to a Participant.

(iv) "Comparison Group" is the group of companies within the S&P 1500 "Materials Sector" that are classified by Standard & Poor's as chemical companies excluding The Chemours Company and Rayonier Advanced Materials and also including Celanese Corporation, Westlake Chemical Corporation, and Huntsman Corporation. The S&P "Materials Sector" index is an index of industrial companies selected from the S&P "Super Composite 1500" Index.

(v) "Cost of Capital" reflects the Company's cost of debt and the cost of equity, expressed as a percentage, reflecting the percentage of interest charged on debt and the percentage of expected return on equity. "Cost", "debt", "equity", "interest", "interest charged on debt", and "return on equity" shall be determined and measured in accordance with accounting principles generally accepted in the United States ("GAAP") as applied in preparing the Company's consolidated financial statements as of the Effective Date, excluding the impact of any subsequent changes during the Performance Period in GAAP or in the manner of application of GAAP in the preparation of the Company's consolidated financial statements, and including the results from any operations which are included in the Company's continuing operations as of the Effective Date and which are subsequently presented as discontinued operations during the Performance Period as a result of a divestiture.

(vi) "Earnings from Continuing Operations" shall be defined as the total sales of the Company minus the costs of all operations of any nature used to produce such sales, including taxes, plus after-tax interest associated with the Company's capital debt (as defined in Section 2(a)(xii). "Sales", "costs of operations", "taxes", and "after-tax interest associated with capital debt" shall be determined and measured in accordance with accounting principles generally accepted in the United States ("GAAP"), as applied in preparing the Company's consolidated financial statements as of the Effective Date, excluding the impact of any subsequent changes during the Performance Period in GAAP or in the manner of application of GAAP in the preparation of the Company's consolidated financial statements, and including the results from any operations which are included in the Company's continuing operations as of the Effective Date and which are subsequently presented as discontinued operations during the Performance Period as a result of a divestiture.

(vii) "Maximum Deductible Amount" means the maximum amount deductible by the Company, taking into consideration the limitations under Code Section 162(m), of the Internal Revenue Code of 1986, as amended, or any similar or successor provisions thereto.

(viii) "Participation Date" means February 28, 2020.

(ix) "Performance Period" means January 1, 2020 through December 31, 2022.

(x) "Performance Year" means one of the three calendar years in the Performance Period.

(xi) "Qualifying Termination" means a termination of employment when one of the following criteria has been met: combined age and years of service which equals or exceeds 75; age 55 and 10 years of service; or age 50 or greater at hire date, and 5 years of service; or age 65.

(xii) "Return on Invested Capital" shall mean the return produced by funds invested in the Company and shall be determined as Earnings from Continuing Operations, as defined in Section 2(a)(vi), divided by the Average Capital Employed. The impact on Earnings from Continuing Operations and on Average Capital Employed of one or more acquisitions with an aggregate purchase price of $300 million or more and of individual acquisitions with a purchase price of greater than $100 million shall be excluded for the calendar year in which the acquisition or acquisitions occur. Average Capital Employed shall be derived by adding the Company's capital debt plus equity at the close of the last day of the year preceding the Performance Year to the Company's capital debt plus equity at the close of the last day of the present Performance Year, with the resulting sum being divided by two. Capital debt is defined as the sum of borrowing by the Company due within one year and long-term borrowing, as designated on the Company's balance sheet. The resulting ratio shall be multiplied by One Hundred (100) in order to convert such to a percentage. Such percentage shall be calculated to the third place after the decimal point (i.e., xx.xxx%), and then rounded to the second place after the decimal point (i.e., xx.xx%). "Equity", "borrowing due within one year", and "long-term borrowing" shall be determined and measured in accordance with accounting principles generally accepted in the United States ("GAAP"), as applied in preparing the Company's consolidated financial statements as of the Effective Date, excluding the impact of any subsequent changes during the Performance Period in GAAP or in the manner of application of GAAP in the preparation of the Company's consolidated financial statements, and including the results from any operations which are included in the Company's continuing operations as of the Effective Date and which are subsequently presented as discontinued operations during the Performance Period as a result of a divestiture.

(xiii) "Target Award" means, with respect to any eligible Participant, the targeted value based on the percentage of base salary specified on Exhibit A hereto for the Salary Grade applicable to such Participant.

(xiv) "TSR" means total stockholder return, as reflected by the sum of (A) change in stock price (measured as the difference between (I) the average of the closing prices of a company's common stock on the New York Stock Exchange, or of the last sale prices or closing prices of such stock on another national trading exchange, as applicable, in the period beginning on the tenth trading day preceding the beginning of the Performance Period and ending on the tenth trading day of the Performance Period and (II) the average of such closing or last sale prices for such stock in the period beginning on the tenth trading day preceding the end of the Performance Period and ending on the tenth trading day following the end of the Performance Period) plus (B) dividends declared, assuming reinvestment of dividends, and expressed as a percentage return on a stockholder's hypothetical investment.

(b) Any capitalized terms used but not otherwise defined in this Subplan shall have the respective meanings set forth in the Plan.

Section 3. Administration. This Subplan shall be administered by the Compensation and Management Development Committee of the Board of Directors. The Committee shall have authority to interpret this Subplan, to prescribe rules and regulations relating to this Subplan, and to take any other actions it deems necessary or advisable for the administration of this Subplan, and shall retain all general authority granted to it under Article 4 of the Plan. At the end of the Performance Period, the Committee shall approve Actual Grant Amounts awarded to participants under this Subplan in accordance with the applicable approval and certification requirements specified in the Plan.

Section 4. Eligibility; Types of Awards. The Participants who are eligible to participate in this Subplan are those employees who, as of the Participation Date, are at Salary Grades 49 through 51 and 105 and above. Employees who are promoted during the Performance Period to a position that would meet the above criteria, but who do not hold such position as of the Participation Date, are not eligible to participate in this Subplan.

Section 5. Form of Payout of Awards. Subject to the terms and conditions of the Plan and this Subplan, amounts earned in connection with the Performance Awards under this Subplan shall be paid out in the form of unrestricted shares of Common Stock; provided, however, that any fractional share of Common Stock, payable as a result of Section 9 of this Subplan or otherwise, shall be paid in cash in an amount representing the market value of such fractional share at the time of payment.

Section 6. Size of Awards.

(a) Target Award. Exhibit A hereto shows by Salary Grade the Target Long-Term Incentive Award as a percentage of base salary and the percentage of Performance Shares determined by Salary Grade. The Salary Grade to be used in determining the percentage of base salary for any Award Amount to a Participant under this Subplan shall be the Salary Grade applicable to the position held by the participant on the Participation Date. The actual size of the Award Amount to the Participant shall be determined by the Committee with respect to Participants who are executive officers of the Company, and by the Committee's senior management delegates in the case of all other Participants, based on the Participant's past performance and potential for contributions to the Company's future long term success. Based on this assessment, the Participant may receive no award, the target award amount, or any amount within the Target Award range of ±25% converted to increments of full Shares. The Committee shall provide its delegates with guidelines for determining the cumulative award targets for Participants who are not executive officers of the Company.

(b) Actual Grant Amount. Subject to the Committee's authority to adjust the Actual Grant Amount described in Section 12, the Actual Grant Amount awarded to the Participant at the end of the Performance Period is determined by applying a multiplier to the Participant's Award Amount. The multiplier shall be determined by comparing Company performance relative to two measures:

(i) The Company's TSR during the Performance Period relative to the TSRs of the companies in the Comparison Group during the Performance Period. The Company and each company in the Comparison Group shall be ranked by TSR, in descending order, with the company having the highest TSR during the Performance Period being ranked number one. The Comparison Group shall further be separated into quintiles (first 20%, second 20%, etc.) and the Company's position, in relation to the Comparison Group, shall be expressed as a position in the applicable quintile ranking; and

(ii) The arithmetic average, for each of the Performance Years during the Performance Period, of the Company's average Return on Invested Capital.

An award multiplier table is shown in Exhibit B. The award multiplier is based on the Company's performance relative to its quintile ranking relative to the Comparison Group, and its average Return on Invested Capital during the Performance Period. The award multipliers range from 2.5 (*i.e.*, 250%), if the Company's TSR is in the top performing quintile (top 20%) of companies in the Comparison Group and the average Return on Invested Capital is greater than 10.51 percentage points, to 0.0 (with no shares of Common Stock earned by Participants under this Subplan) if the Company does not meet the specified levels of performance relative to the two measures.

Section 7. Composition of Comparison Group. A company in the Comparison Group may be dropped from the Comparison Group if a company's common stock ceases to be publicly traded on a national stock exchange or market; or a company is a party to a significant merger, acquisition, or other reorganization. Under these, or similar, circumstances, the company or companies may be removed from the Comparison Group and may be replaced with another company or companies by Standard & Poor's, consistent with their established criteria for selection of companies for the Comparison Group. In any case where the Comparison Group ceases to exist, or is otherwise determined to no longer be appropriate as the basis for a measure under this Subplan, the Committee may designate a replacement Comparison Group. In any such case, the Committee shall have authority to determine the appropriate method of calculating the TSR of such former and/or replacement Comparison Group, whether by complete substitution of the replacement Comparison Group (and disregard of the former Comparison Group) over the entire Performance Period or by pro rata calculations for each Comparison Group or otherwise.

Section 8. Preconditions to Payout Under Performance Awards.

(a) Continuous Employment. Except as specified in paragraph (b) below, to be eligible for payout under a Performance Award under this Subplan, a Participant must remain continuously employed with the Company or a Subsidiary at all times from the Effective Date through the Award Payment Date.

(b) Qualifying Termination, Death, Disability, or Termination for an Approved Reason Before the Award Payment Date. If a Participant's employment is terminated due to a Qualifying Termination, death, disability, or any approved reason as determined by the Committee (in the case of an executive officer) or the executive officer responsible for Human Resources (in the case of non-executive officers) prior to the Award Payment Date, the Participant shall receive, subject to the terms and conditions of the Plan and this Subplan, a payout representing a prorated portion of the Actual Grant Amount to which such Participant otherwise would have been entitled to receive under Section 6 of this Subplan had the Participant remained in employment to the end of the Performance Period, with the precise amount of such payout to be determined by multiplying the Actual Grant Amount by a fraction, the numerator of which is the number of full calendar months employed in the Performance Period from the award effective date through and including the effective date of such termination, and the denominator of which is 36 (the total number of months in the Performance Period).

Section 9. Manner and Timing of Award Payments.

(a) Timing of Award Payment. Except as provided in Section 9(c), if any Awards are payable under this Subplan, the payment of such Awards to Participants shall be made as soon as is administratively practicable after final approval by the Committee of such payments and within the first taxable year immediately following the end of the Performance Period.

(b) Tax Withholding. The Company may withhold or require the grantee to remit a cash amount sufficient to satisfy federal, state, and local taxes (including the participant's FICA obligation) required by law to be withheld. Further, either the Company or the grantee may elect to satisfy the withholding requirement by having the Company withhold shares of Common Stock having a Fair Market Value on the date the tax is to be determined equal to the minimum statutory total tax which could be imposed on the transaction.

(c) Deferral of Award in Excess of the Maximum Deductible Amount. If payment under a Performance Award would, or could in the reasonable estimation of the Committee, result in the participant's receiving compensation in excess of the Maximum Deductible Amount in a given year, then such portion (or all, as applicable) of the Award as would, or could in the reasonable estimation of the Committee, cause such participant to receive compensation from the Company in excess of the Maximum Deductible Amount may, at the sole discretion of the Committee, be converted into the right to receive a cash payment, which shall be paid at such time as permitted under Internal Revenue Code Section 409A and applicable Treasury Regulations and guidance thereunder.

Section 10. No Rights as Stockholder. No certificates for shares of Common Stock shall be issued under this Subplan, nor shall any participant have any rights as a stockholder as a result of participation in this Subplan, until the Actual Grant Amount has been determined and such participant has otherwise become entitled to an Award under the terms of the Plan and this Subplan. In particular, no participant shall have any right to vote or to receive dividends on any shares of Common Stock under this Subplan until certificates for such shares have been issued as described above.

Section 11. Application of Plan. The provisions of the Plan shall apply to this Subplan, and the provisions of this Subplan shall be interpreted in a manner consistent with the terms of the Plan.

Section 12. Adjustment of Actual Grant Amount. The Committee may, in its sole discretion, adjust the Actual Grant Amount to reflect overall Company performance and business and financial conditions.

Section 13. Reimbursement of Certain Compensation Following Restatement. The Award (including any shares of Common Stock received upon payout of the Award and any amount received for the sale of such shares) is subject to the provisions of the Plan and any applicable law (including the Sarbanes-Oxley Act of 2002, the Dodd-Frank Act, and implementing rules and regulations of the Securities and Exchange Commission (the "SEC") and the New York Stock Exchange (the "NYSE")) or Company policy (including the Executive Incentive Pay Clawback Policy as adopted by the Committee on February 3, 2015 and as may be amended from time to time consistent with and to conform to SEC and NYSE rules and regulations) requiring reimbursement to the Company of certain incentive-based compensation following an accounting restatement due to material non-compliance by the Company with any financial reporting requirement or due to other events or conditions.

Section 14. Amendments. The Committee may, from time to time, amend this Subplan in any manner.

Section 15. Code Section 409A. All Performance Awards granted under this Subplan shall be subject to the provisions of the Plan concerning Code Section 409A, which provisions shall be incorporated into this Subplan by reference.

EXHIBIT A

Eastman Chemical Company

Performance Share Award Grant Table

2020-2022 Cycle

On file in Global Compensation

EXHIBIT B

2020-2022 Performance Share Award Payout Performance Measures Multiplier Table

	Return on Invested Capital (ROIC) % Performance					
Eastman TSR Relative to Comparison Group (rTSR)	≥6.51 to 7.50	7.51 to 8.50	8.51 to 9.50	9.51 to 10.50	10.51 to 11.50	>11.51
5th quintile	0.0	0.0	0.0	0.2	0.3	0.4
4th quintile	0.0	0.2	0.4	0.6	0.8	0.9
3rd quintile <50%	0.4	0.6	0.8	1.0	1.2	1.4
3rd quintile ≥50%	0.6	0.8	1.0	1.3	1.5	1.7
2nd quintile	1.0	1.2	1.4	1.7	1.9	2.1
1st quintile	1.0	1.8	2.0	2.3	2.4	2.5

Exhibit 10.21

EASTMAN CHEMICAL COMPANY
2017 OMNIBUS STOCK COMPENSATION PLAN

AWARD NOTICE FOR GRANT OF PERFORMANCE SHARES

Grantee: **[NAME]**

Performance Period: January 1, 2020 through December 31, 2022

Number of Performance Shares Granted ("Target Award"): **[X]**

Grant Date: January 1, 2020

This Award Notice for the Grant of Performance Shares (this "Award Notice") by and between Eastman Chemical Company ("Company") and the Grantee named above (referred to below as "you") evidences the grant by the Company of performance shares ("Performance Shares" or the "Award") to you on the date stated above (the "Grant Date") and your acceptance of such Performance Shares in accordance with the provisions of the Eastman Chemical Company 2017 Omnibus Stock Compensation Plan, as amended from time to time (the "Plan") and the provisions of the 2020-2022 Performance Share Award Subplan (the "Subplan"). For purposes of this Award Notice, any references to the Plan shall include the Subplan.

The Performance Shares are subject to the terms and conditions set forth in the Plan (which is incorporated herein by reference), any rules and regulations adopted by the Board of Directors of the Company or the Compensation and Management Development Committee (collectively, the "Committee"), and this Award Notice. In the event of any conflict between the provisions of the Plan and the provisions of this Award Notice, the terms, conditions, and provisions of the Plan shall control, and this Award Notice shall be deemed to be modified accordingly. Capitalized terms used in this Award Notice that are not defined herein shall have the meanings set forth in the Plan. For purposes of this Award Notice, "Employer" means the Subsidiary that employs you, if you are not employed directly by the Company.

1. Performance Share Grant. You have been granted the number of Performance Shares specified above as the Target Award. Each Performance Share represents the right to receive a number of shares of the Company's $.01 par value Common Stock ("Common Stock") upon the attainment of specified performance conditions by the Company; provided, however, that any fractional share of Common Stock shall be paid in cash in an amount representing the market value of such fractional share at the time of payment.

2. Performance Conditions. The Performance Shares are subject to the attainment of the following performance conditions as defined in Section 6 of the Subplan and as specifically set forth in Exhibit A of this Award Notice (the "Performance Conditions"):

(a) a comparison of the total stockholder return (referred to in the Subplan as "TSR," and reflecting both the change in stock price and the amount of dividends declared) of the Company during the Performance Period, to the TSRs of the companies in the Comparison Group (the group of companies within the Standard and Poor’s “Materials Sector” that are classified as chemical companies excluding The Chemours Company and Rayonier Advanced Materials and also including Celanese Corporation, Westlake Chemical Corporation, and Huntsman Corporation. The S&P “Materials Sector” index, identified as Global Industry Classification Standard 15, is an index of industrial companies selected from the S&P “Super Composite 1500” index); and

(b) the arithmetic average for each of the Performance Years during the Performance Period of the Company’s average Return on Invested Capital.

3. Vesting of Performance Shares. Subject to Sections 7 and 8 of this Award Notice, if you remain continuously employed with your Employer, the Company or one of its Subsidiaries during the Performance Period, you shall become vested in a number of Performance Shares equal to the Target Award multiplied by the multiplier as set forth in Exhibit A of this Award Notice corresponding to the Company's achievement of the Performance Conditions ("Actual Earned Shares")

4. Settlement of Performance Shares. The Company shall direct its transfer agent to issue you one (1) share of Common Stock for each Actual Earned Share in your name or a nominee in book entry, or to issue one (1) or more physical stock certificates representing such shares of Common Stock in your name, as soon as administratively practicable after the end of the Performance Period and final approval by the Committee; provided, however, that if payment of the Actual Earned Shares could, in the reasonable estimation of the Committee, result in your receiving compensation, in the year of scheduled payment, in excess of the amount deductible by the Company under Section 162(m) of the Internal Revenue Code of 1986, as amended (the "Code"), or other applicable local laws, rules or regulations, then such portion (or all, as applicable) of the Actual Earned Shares as could, in the reasonable estimation of the Committee, create such excess compensation, may, at the sole discretion of the Committee, be converted into the right to receive a cash payment, which shall be paid at such time as permitted under Code Section 409A (or any successor provision which may be enacted), applicable Treasury Regulations and guidance thereunder, as specified in Section 9 of the Subplan, or as permitted under applicable local laws, rules or regulations.

If any portion of the Actual Earned Shares is converted into a right to receive a cash payment as described above, an amount representing the Fair Market Value of the deferred portion of the Actual Earned Shares will be credited to the Eastman Stock Account of the Eastman Chemical Company Executive Deferred Compensation Plan (the “EDCP”) and hypothetically invested in units of Common Stock. Thereafter, such amount will be treated in the same manner as other investments in the EDCP, all as specified in Section 9 of the Subplan.

5. Nontransferability of Performance Shares; Limitation on Issuance of Shares. The Performance Shares are not transferable except by will or by the laws of descent and distribution, and may not be sold, assigned, pledged or encumbered in any way, whether by operation of law or otherwise. Following the Performance Period, certificates for the shares of Common Stock underlying the Actual Earned Shares may be issued during your lifetime only to you, except in the case of a permanent disability involving mental incapacity. Upon your death, any unissued shares of Common Stock underlying the Actual Earned Shares may be transferred to your legal representative as determined under applicable law, subject to the terms set forth in Section 7 of this Performance Shares Notice.

6. Limitation of Rights. You will not have any rights as a stockholder with respect to the shares of Common Stock underlying the Performance Shares until you become the holder of record of such shares following the determination of the Actual Earned Shares upon conclusion of the Performance Period and the issuance of such shares to you pursuant to Section 4 of this Award Notice.

7. Termination.

(a) Upon a termination of your employment with your Employer, the Company or any of its Subsidiaries by reason of a Qualifying Termination (as defined below) or by reason of death or disability, or for another approved reason as determined by the Committee (in the case of the executive officers) or the executive officer responsible for Human Resources (in the case of non-executive employees), you (or your legal representative, as applicable) will receive after the end of the Performance Period, subject to the terms and conditions of the Plan, a pro-rata portion of the Actual Earned Shares that you otherwise would have received had you remained in continuous employment with your Employer, the Company or one of its Subsidiaries during the entire Performance Period based upon the number of full months in which you were employed during the Performance Period. For purposes of this Award Notice, a “Qualifying Termination” means a termination of employment by reason of resignation or without Cause when:

- your combined age and years of service with your Employer, the Company and its Subsidiaries equals or exceeds 75;
- you have attained age 55 and 10 years of service with your Employer, the Company and its Subsidiaries;
- you had attained age 50 or greater as of your hire date and you have attained 5 years of service with your Employer, the Company and its Subsidiaries; or
- you have attained age 65.

(b) Upon termination of employment with your Employer, the Company or any of its Subsidiaries for reasons other than those described in this Section 7, including for Cause, your Performance Shares shall be immediately canceled and forfeited. In such event, neither you nor any of your successors, heirs, assigns or personal representatives will thereafter have any further rights or interest in such shares or otherwise in this Award. For purposes of the foregoing, “Cause” shall have the same meaning as set forth in the Plan.

8. Income Tax and Social Insurance Contributions Withholding.

(a) Regardless of any action the Company or your Employer takes with respect to any or all income tax (including U.S. federal, state and local taxes and/or non-U.S. taxes), social insurance, payroll tax, payment on account or other tax-related withholding (“Tax-Related Items”), you acknowledge that the ultimate liability for all Tax-Related Items legally due by you is and remains your responsibility and that the Company and your Employer: (i) make no representations or undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of the Performance Shares, including the grant of the Performance Shares, settlement or payment of the Performance Shares pursuant to the attainment of the performance objectives, and the subsequent sale of any shares of Common Stock acquired pursuant to the Performance Shares and the receipt of any dividends; and (ii) do not commit to structure the terms of the grant or any aspect of the Performance Shares to reduce or eliminate your liability for Tax-Related Items.

(b) Prior to the delivery of shares of Common Stock upon settlement or payment of the Performance Shares pursuant to the attainment of the performance objectives, if your country of residence (and/or your country of employment, if different) requires withholding of Tax-Related Items, the Company shall withhold a sufficient number of whole shares of Common Stock otherwise issuable under the Performance Shares that have an aggregate Fair Market Value sufficient to pay the Tax-Related Items required to be withheld. In cases where the Fair Market Value of the number of whole shares of Common Stock withheld is greater than the Tax-Related Items required to be withheld, the Company shall make a cash payment to you equal to the difference as soon as administratively practicable. The cash equivalent of the shares of Common Stock withheld will be used to settle the obligation to withhold the Tax-Related Items. Alternatively, the Company or your Employer may withhold the Tax-Related Items required to be withheld with respect to the shares of Common Stock in cash from your regular salary/wages, or from any other amounts payable to you. In the event the withholding requirements are not satisfied through the withholding of shares of Common Stock by the Company or through the withholding of cash from your regular salary/wages or any other amounts payable to you, no shares of Common Stock will be issued to you (or your estate) upon settlement or payment of the Performance Shares unless and until satisfactory arrangements (as determined by the Board of Directors) have been made by you with respect to the payment of any Tax-Related Items which the Company and your Employer determine, in their sole discretion, must be withheld or collected with respect to such Award. If you are subject to Tax-Related Items in more than one jurisdiction, you acknowledge that the Company or your Employer may be required to withhold or account for Tax-Related Items in more than one jurisdiction. By accepting the Performance Shares, you expressly consent to the withholding of shares of Common Stock and/or the withholding of cash from your regular salary/wages or other amounts payable to you as provided for hereunder. All other Tax-Related Items related to the Performance Shares and any shares of Common Stock delivered in payment thereof are your sole responsibility.

9. Noncompetition; Confidentiality. You will not, without the written consent of the Company, either during your employment with your Employer, the Company or any of its Subsidiaries or thereafter, disclose to anyone or make use of any confidential information which you have acquired during your employment relating to any of the business of your Employer, the Company or any of its Subsidiaries, except as such disclosure or use may be required in connection with your work as an employee of the Company. During your employment with your Employer, the Company, or any of its Subsidiaries, and for a period of two (2) years after the termination of such employment, you will not, either as principal, agent, consultant, employee or otherwise, engage in any work or other activity in competition with the Company in the field or fields in which you have worked for your Employer, the Company or any of its Subsidiaries. The provisions in this Section 9 apply separately in the United States and in other countries but only to the extent that its application shall be reasonably necessary for the protection of your Employer, the Company or any of its Subsidiaries. You will forfeit all rights under this Award Notice to or related to the Performance Shares if, in the determination of the Committee (in the case of executive officers) or of the executive officer responsible for Human Resources (in the case of non-executive employees), you have violated any of the provisions of this Section 9, and in that event any payment or other action with respect to the Performance Shares shall be made or taken, if at all, in the sole discretion of the Committee or the executive officer responsible for Human Resources.

10. Restrictions on Issuance of Shares. If at any time the Company determines that listing, registration or qualification of the shares of Common Stock covered by an Award upon any securities exchange or under any state or federal law, or the approval of any governmental agency, is necessary or advisable prior to the delivery of any certificate for shares of Common Stock subject to the Performance Shares, no such certificate may be delivered unless and until such listing, registration, qualification or approval shall have been effected or obtained free of any conditions not acceptable to the Company.

11. Change in Ownership; Change in Control. Article 14 of the Plan contains certain special provisions that will apply in the event of a Change in Ownership or Change in Control, respectively.

12. Adjustment of Terms. If the number of outstanding shares of Common Stock changes through the declaration of stock dividends or stock splits prior to the settlement of the Performance Shares, the shares of Common Stock subject to this Award automatically will be adjusted, according to the provisions of Article 15 of the Plan. In the event of any other change in the capital structure of the shares of Common Stock or other corporate events or transactions involving the Company, the Committee is authorized to make appropriate adjustments to this Award.

13. Adjustment of Actual Grant Amount. The Committee may, in its sole discretion, adjust the Actual Earned Shares to reflect overall Company performance and business and financial conditions.

14. Reimbursement of Certain Compensation Following Restatement. The Award (including any shares of Common Stock received upon payout of the Award and any amount received for the sale of such shares) is subject to the provisions of the Plan and any applicable law (including the Sarbanes-Oxley Act of 2002, the Dodd-Frank Act, and implementing rules and regulations of the Securities and Exchange Commission (the “SEC”) and the New York Stock Exchange (the “NYSE”)) or Company policy (including the Executive Incentive Pay Clawback Policy as adopted by the Committee on February 3, 2015 and as may be amended from time to time consistent with and to conform to SEC and NYSE rules and regulations) requiring reimbursement to the Company of certain incentive-based compensation following an accounting restatement due to material non-compliance by the Company with any financial reporting requirement or due to other events or conditions. For purposes of the foregoing, you expressly and explicitly authorize the Company to issue instructions, on your behalf, to any brokerage firm or third party administrator engaged by the Company to hold your shares of Common Stock and other amounts acquired under the Plan to re-convey, transfer, or otherwise return such shares of Common Stock and/or other amounts to the Company.

15. Repatriation and Legal/Tax Compliance Requirements. If you are a resident of or employed in a country other than the United States, you agree, as a condition of the grant of the Performance Shares, to repatriate all payments attributable to the shares of Common Stock and/or cash acquired under the Plan (including, but not limited to, dividends and any proceeds derived from the sale of the shares of Common Stock acquired pursuant to this Award) in accordance with local foreign exchange rules and regulations in your country of residence (and country of employment, if different). In addition, you agree to take any and all actions, and consent to any and all actions taken by your Employer, the Company or any of its Subsidiaries as may be required to allow your Employer, the Company or any of its Subsidiaries to comply with local laws, rules and regulations in your country of residence (and country of employment, if different). Finally, you agree to take any and all actions that may be required to comply with your personal legal and tax obligations under local laws, rules and regulations in your country of residence (and country of employment, if different).

If you are resident or employed in a country that is a member of the European Union, the grant of the Performance Shares and this Award Notice is intended to comply with the age discrimination provisions of the EU Equal Treatment Framework Directive, as implemented into local law (the “Age Discrimination Rules”). To the extent that a court or tribunal of competent jurisdiction determines that any provision of this Award Notice is invalid or unenforceable, in whole or in part, under the Age Discrimination Rules, the Company, in its sole discretion, shall have the power and authority to revise or strike such provision to the minimum extent necessary to make it valid and enforceable to the full extent permitted under local law.

16. No Guarantee of Employment. The grant of the Performance Shares shall not create any employment relationship with the Company or any of its Subsidiaries. Further, the grant of the Performance Shares shall not confer upon you any right of continued employment with your Employer nor limit in any way the right of your Employer to terminate your employment at any time.

17. Discretionary Nature of Grant; No Vested Rights. You acknowledge and agree that the Plan is discretionary in nature and may be amended, cancelled, or terminated by the Company, in its sole discretion, at any time. The grant of the Performance Shares under the Plan is a one-time benefit and does not create any contractual or other right to receive a grant of Awards or benefits in lieu of Awards in the future. Future grants, if any, will be at the sole discretion of the Company, including, but not limited to, the form and timing of any grant, the number of shares of Common Stock subject to the grant, and the vesting provisions. Any amendment, modification or termination of the Plan or the Subplan shall not constitute a change or impairment of the terms and conditions of your employment with your Employer.

18. Currency Fluctuation. Neither the Company nor any Affiliate shall be liable for any foreign exchange rate fluctuation between the local currency of your country of residence and the U.S. dollar that may affect the value of the Performance Shares or of any amounts due to you pursuant to the settlement of the Performance Shares or the subsequent sale of any shares of Common Stock acquired upon settlement of the Performance Shares.

19. Termination Indemnities. Your participation in the Plan and Subplan is voluntary. The value of the Performance Shares and any other awards granted under the Plan and Subplan is an extraordinary item of compensation outside the scope of your employment (and your employment contract, if any). Any grant under the Plan or Subplan, including the grant of the Performance Shares, is not part of normal or expected compensation for purposes of calculating any severance, resignation, redundancy, end of service payments, bonuses, long-service awards, pension, or retirement benefits or similar payments.

20. Data Privacy. The Company is located at 200 South Wilcox Drive, Kingsport, Tennessee 37662, U.S.A. and grants Performance Shares under the Plan to employees of the Company and its Affiliates and Subsidiaries in its sole discretion. In conjunction with the Company's grant of the Performance Shares under the Plan and its ongoing administration of such awards, the Company is providing the following information about its data collection, processing and transfer practices ("Personal Data Activities"). In accepting the grant of the Performance Shares, you expressly and explicitly consent to the Personal Data Activities as described herein.

(a) Data Collection, Processing and Usage. The Company collects, processes and uses your personal data, including your name, home address, email address, and telephone number, date of birth, social insurance number or other identification number, salary, citizenship, job title, any shares of Common Stock or directorships held in the Company, and details of all Performance Shares or any other equity compensation awards granted, canceled, exercised, vested, or outstanding in your favor, which the Company receives from you or your Employer. In granting the Performance Shares under the Plan, the Company will collect your personal data for purposes of allocating shares of Common Stock and implementing, administering and managing the Plan. The Company's legal basis for the collection, processing and usage of your personal data is your consent.

(b) Stock Plan Administration Service Provider. The Company transfers your personal data to Fidelity Stock Plan Services LLC, an independent service provider based in the United States, which assists the Company with the implementation, administration and management of the Plan (the "Stock Plan Administrator"). In the future, the Company may select a different Stock Plan Administrator and share your personal data with another company that serves in a similar manner. The Stock Plan Administrator will open an account for you to receive and trade shares of Common Stock. You will be asked to agree on separate terms and data processing practices with the Stock Plan Administrator, which is a condition to your ability to participate in the Plan.

(c) International Data Transfers. The Company and the Stock Plan Administrator are based in the United States. You should note that your country of residence may have enacted data privacy laws that are different from the United States. The Company's legal basis for the transfer of your personal data to the United States is your consent.

(d) Voluntariness and Consequences of Consent Denial or Withdrawal. Your participation in the Plan and your grant of consent is purely voluntary. You may deny or withdraw your consent at any time. If you do not consent, or if you withdraw your consent, you may be unable to participate in the Plan. This would not affect your existing employment or salary; instead, you merely may forfeit the opportunities associated with the Plan.

(e) Data Subjects Rights. You may have a number of rights under the data privacy laws in your country of residence. For example, your rights may include the right to (i) request access or copies of personal data the Company processes, (ii) request rectification of incorrect data, (iii) request deletion of data, (iv) place restrictions on processing, (v) lodge complaints with competent authorities in your country of residence, and/or (vi) request a list with the names and addresses of any potential recipients of your personal data. To receive clarification regarding your rights or to exercise your rights, you should contact your local HR manager or the Company's Human Resources Department.

21. Private Placement. If you are a resident and/or employed outside of the United States, the grant of the Performance Shares is not intended to be a public offering of securities in your country of residence (and country of employment, if different). The Company has not submitted any registration statement, prospectus or other filing with the local securities authorities (unless otherwise required under local law), and the Performance Shares is not subject to the supervision of the local securities authorities.

22. Insider Trading/Market Abuse Laws. By participating in the Plan, you agree to comply with the Company's policy on insider trading (to the extent that it is applicable to you). You further acknowledge that, depending on your or your broker's country of residence or where the shares of Common Stock are listed, you may be subject to insider trading restrictions and/or market abuse laws which may affect your ability to accept, acquire, sell or otherwise dispose of the shares of Common Stock, rights to shares of Common Stock (e.g., Performance Shares) or rights linked to the value of shares of Common Stock, during such times you are considered to have "inside information" regarding the Company (as defined by the laws or regulations in your country of employment (and country of residence, if different)). Local insider trading laws and regulations may prohibit the cancellation or amendment of orders you place before you possess inside information. Furthermore, you could be prohibited from (i) disclosing the inside information to any third party (other than on a "need to know" basis) and (ii) "tipping" third parties or causing them otherwise to buy or sell securities. You understand that third parties include fellow employees. Any restriction under these laws or regulations are separate from and in addition to any restrictions that may be imposed under any applicable Company insider trading policy. You acknowledge that it is your responsibility to comply with any applicable restrictions and that you should therefore consult your personal advisor on this matter.

23. Electronic Delivery. The Company, in its sole discretion, may decide to deliver any documents related to the Performance Shares to you under the Plan by electronic means. You hereby consent to receive such documents by electronic delivery and agree to participate in the Plan through an on-line or electronic system established and maintained by the Company or a third party designated by the Company.

24. English Language. If you are resident outside of the United States, you acknowledge and agree that it is your express intent that the Award Notice, the Plan, the Subplan and all other documents, notices and legal proceedings entered into, given or instituted pursuant to the Performance Shares, be drawn up in English. If you have received the Award Notice, the Plan or any other documents related to the Performance Shares translated into a language other than English, and if the meaning of the translated version is different from the English version, the meaning of the English version shall control.

25. Addendum. Notwithstanding any provisions of the Award Notice to the contrary, the Performance Shares shall be subject to any special terms and conditions for your country of residence (and country of employment, if different), as set forth in the applicable Addendum to the Award Notice. Further, if you transfer residence and/or employment to another country reflected in an Addendum to the Award Notice, the special terms and conditions for such country will apply to you to the extent the Company determines, in its sole discretion, that the application of such terms and conditions is necessary or advisable in order to comply with local law, rules and regulations or to facilitate the operation and administration of the Performance Shares, the Plan, and the Subplan (or the Company may establish alternative terms and conditions as may be necessary or advisable to accommodate your transfer). Any applicable Addendum shall constitute part of the Performance Shares Notice.

26. Additional Requirements. The Company reserves the right to impose other requirements on the Performance Shares, any payment made pursuant to the Performance Shares, and your participation in the Plan, to the extent the Company determines, in its sole discretion, that such other requirements are necessary or advisable in order to comply with local law, rules and regulations or to facilitate the operation and administration of the Performance Shares and the Plan. Such requirements may include (but are not limited to) requiring you to sign any agreements or undertakings that may be necessary to accomplish the foregoing.

27. Governing Law. This Award Notice shall be construed, administered and governed in all respects under and by the applicable laws of the State of Delaware, excluding any conflicts or choice of law rule or principle that might otherwise refer construction or interpretation to the substantive law of another jurisdiction.

28. Venue. In accepting the Performance Shares grant, you are deemed to submit to the exclusive jurisdiction and venue of the federal or state courts of the State of Tennessee of the United States of America to resolve any and all issues that may arise out of or relate to the Performance Shares and the Award Notice.

29. Binding Effect. This Award Notice shall be binding upon the Company and you and its and your respective heirs, executors, administrators and successors.

30. Conflict. To the extent the terms of the Award Notice are inconsistent with the Plan, the provisions of the Plan shall control and supersede any inconsistent provision of the Award Notice.

31. Non-Negotiable Terms. The terms of the Award Notice are not negotiable, but you may refuse to accept the Performance Shares by notifying the Company's executive officer responsible for Human Resources in writing; any such refusal of acceptance will immediately cancel and forfeit the award.

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[Remainder of page intentionally left blank]

Exhibit 10.21

EASTMAN CHEMICAL COMPANY
2017 OMNIBUS STOCK COMPENSATION PLAN

ADDENDUM TO AWARD NOTICE FOR GRANT OF PERFORMANCE SHARES

In addition to the terms of Eastman Chemical Company 2017 Omnibus Stock Compensation Plan (the “Plan”), the 2020-2022 Performance Share Award Subplan (the "Subplan"), and the Award Notice for the Grant of Performance Shares (the “Award Notice”), the Performance Shares are subject to the following additional terms and conditions as set forth in this addendum to the extent you reside and/or are employed in one of the countries addressed herein (the “Addendum”). All defined terms as contained in this Addendum shall have the same meaning as set forth in the Plan, the Subplan, and the Award Notice. To the extent you transfer residence and/or employment to another country, the special terms and conditions for such country as reflected in this Addendum (if any) will apply to you to the extent the Company determines, in its sole discretion, that the application of such terms and conditions is necessary or advisable in order to comply with local laws, rules and regulations, or to facilitate the operation and administration of the Performance Shares, the Plan, and the Subplan (or the Company may establish alternative terms and conditions as may be necessary or advisable to accommodate your transfer).

European Union ("EU") / European Economic Area ("EEA")

1. Data Privacy. If you reside and/or you are employed in the EU / EEA, the following provision replaces Section 20 of the Award Notice:

The Company is located at 200 South Wilcox Drive, Kingsport, Tennessee 37662, U.S.A. and grants Performance Shares under the Plan to employees of the Company and its Affiliates and Subsidiaries in its sole discretion. You should review the following information about the Company's data processing practices.

(a) Data Collection, Processing and Usage. Pursuant to applicable data protection laws, you are hereby notified that the Company collects, processes and uses certain personally-identifiable information about you for the legitimate interest of implementing, administering and managing the Plan and generally administering equity awards; specifically, including your name, home address, email address and telephone number, date of birth, social insurance number or other identification number, salary, citizenship, job title, any shares of Common Stock or directorships held in the Company, and details of all options or any other awards granted, canceled, exercised, vested, or outstanding in your favor, which the Company receives from you or your Employer. In granting the Performance Shares under the Plan, the Company will collect your personal data for purposes of allocating shares of Common Stock and implementing, administering and managing the Plan. The Company's collection, processing, use and transfer of your personal data is necessary for the performance of the Company's contractual obligations under the Plan and pursuant to the Company's legitimate interest of managing and generally administering employee equity awards. Your refusal to provide personal data would make it impossible for the Company to perform its contractual obligations and may affect your ability to participate in the Plan. As such, by participating in the Plan, you voluntarily acknowledge the collection, processing and use of your personal data as described herein.

(b) Stock Plan Administration Service Provider. The Company transfers participant data to Fidelity Stock Plan Services LLC, an independent service provider based in the United States, which assists the Company with the implementation, administration and management of the Plan (the "Stock Plan Administrator"). In the future, the Company may select a different Stock Plan Administrator and share your data with another company that serves in a similar manner. The Stock Plan Administrator will open an account for you to receive and trade shares of Common Stock acquired under the Plan. You will be asked to agree on separate terms and data processing practices with the Stock Plan Administrator, which is a condition to your ability to participate in the Plan.

(c) International Data Transfers. The Company and the Stock Plan Administrator are based in the United States. The Company can only meet its contractual obligations to you if your personal data is transferred to the United States. The Company's legal basis for the transfer of your personal data to the United States is to satisfy its contractual obligations to you and/or its use of the standard data protection clauses adopted by the EU Commission.

(d) Data Retention. The Company will use your personal data only as long as is necessary to implement, administer and manage your participation in the Plan or as required to comply with legal or regulatory obligations, including under tax and security laws. When the Company no longer needs your personal data, the Company will remove it from its systems. If the Company keeps your data longer, it would be to satisfy legal or regulatory obligations and the Company's legal basis would be for compliance with relevant laws or regulations.

(e) Data Subject Rights. You may have a number of rights under data privacy laws in your country of residence. For example, your rights may include the right to (i) request access or copies of personal data the Company processes, (ii) request rectification of incorrect data, (iii) request deletion of data, (iv) place restrictions on processing, (v) lodge complaints with competent authorities in your country of residence, and/or (vi) request a list with the names and addresses of any potential recipients of the Participant's personal data. To receive clarification regarding your rights or to exercise your rights, you should contact your local HR manager or the Company's Human Resources Department.

Brazil

1. Labor Law Acknowledgment. By accepting the Performance Shares, you expressly acknowledge and agree that (i) the benefits provided under the Award Notice and the Plan are the result of commercial transactions unrelated to your employment; (ii) the Award Notice and the Plan are not part of the terms and conditions of your employment; and (iii) the income from the Performance Shares, if any, is not part of your remuneration from employment.

2. Compliance with Law. By accepting the Performance, you expressly acknowledge and agree to comply with applicable Brazilian laws and to pay any and all applicable taxes associated with the vesting of the Performance Shares, the issuance and/or sale of shares of Common Stock acquired under the Plan or the receipt of any dividends.

China

The following provisions shall apply to the extent you are a local national of the People's Republic of China ("PRC"):

1. Termination of Employment. Except as otherwise required by the State Administration of Foreign Exchange (the "SAFE") and notwithstanding any provision in the Award Notice or the Plan to the contrary, upon a termination of your employment with your Employer, the Company or any of its Subsidiaries by reason of a Qualifying Termination (as defined below) or by reason of death or disability, or for another approved reason as determined by the Committee (in the case of the executive officers) or the executive officer responsible for Human Resources (in the case of non-executive employees) prior to completion of the Performance Period:

   a. If such termination occurs before the mid-point of the Performance Period, you (or your legal representative, as applicable) shall become vested in a number of Performance Shares equal to the Target Award; or

   b. If such termination occurs on or after the mid-point of the Performance Period, you (or your legal representative, as applicable) shall become vested in a number of Performance Shares equal to the Target Award multiplied by the multiplier as set forth in Exhibit A of this Award Notice corresponding to the Company's achievement of the most recent Performance Conditions available on the date of termination, as determined by the Committee in its sole discretion.

2. Immediate Sale of Shares. Notwithstanding anything in the Award Notice to the contrary, all shares of Common Stock issued in connection with your Performance Shares shall be immediately sold unless and until the Committee determines otherwise. For purposes of the foregoing, the Company shall establish procedures for effectuating the immediate sale of the shares of Common Stock issued in connection with your Performance Shares (including procedures whereby the Company may issue sales instructions on your behalf), and you hereby agree to comply with such procedures and to take any and all actions as the Company may determine, in its sole discretion, are necessary or advisable for purposes of complying with PRC laws, rules and regulations.

3. Exchange Control Restrictions. You acknowledge and agree that you will be required immediately to repatriate to the PRC the proceeds from the sale of any shares of Common Stock acquired under the Plan, as well as any other cash amounts attributable to the shares of Common Stock acquired under the Plan (collectively, "Cash Proceeds"). Further, you acknowledge and agree that the repatriation of the Cash Proceeds must be effected through a special bank account established by your Employer, the Company or one of its Subsidiaries, and you hereby consent and agree that the Cash Proceeds may be transferred to such account by the Company on your behalf prior to being delivered to you. The Cash Proceeds may be paid to you in U.S. dollars or local currency at the Company's discretion. If the Cash Proceeds are paid to you in U.S. dollars, you understand that a U.S. dollar bank account must be established and maintained in China so that the proceeds may be deposited into such account. If the Cash Proceeds are paid to you in local currency, you acknowledge and agree that the Company is under no obligation to secure any particular exchange conversion rate and that the Company may face delays in converting the Cash Proceeds to local currency due to exchange control restrictions. You agree to bear any currency fluctuation risk between the time the shares of Common Stock are sold and the Cash Proceeds are converted into local currency and distributed to you. You further agree to comply with any other requirements that may be imposed by your Employer, the Company and its Subsidiaries in the future in order to facilitate compliance with exchange control requirements in the PRC.

4. Administration. Your Employer, the Company and its Subsidiaries shall not be liable for any costs, fees, lost interest or dividends or other losses you may incur or suffer resulting from the enforcement of the terms of this Addendum or otherwise from the operation and enforcement of the terms of the Plan, the Award Notice and the Option in accordance with PRC law including, without limitation, any applicable SAFE rules, regulations and requirements.

BY SIGNING BELOW, YOU ACKNOWLEDGE, UNDERSTAND AND AGREE TO THE PROVISIONS OF THE AWARD NOTICE, THE PLAN AND THIS ADDENDUM.

____
Signature

____
Printed Name

____
Date

IMPORTANT NOTE: THIS ADDENDUM MUST BE SIGNED AND RETURNED TO

Singapore (ECAP)
Compensation and Benefits / Regional HR Manager
9 North Buona Visa Drive
Singapore 138588

NO LATER THAN 90 DAYS FOLLOWING THE GRANT DATE.

Estonia

1. Performance Share Grant. The following provision shall replace Section 1 of the Award Notice in its entirety:

You have been granted the number of Performance Shares specified above as the Target Award. Each Performance Share represents the right to receive a number of shares of Company's $.01 par value Common Stock ("Common Stock") upon attainment of specified performance conditions by the Company; provided, however, in the case of any fractional shares, the number of shares of Common Stock issued will be rounded down to the nearest whole number. Notwithstanding any terms and conditions in the Award Notice or the Plan, you will have no right to receive a cash payment in connection with the Performance Shares.

2. Settlement of Performance Shares. Notwithstanding any discretion contained in Section 4 of the Award Notice or anything to the contrary in the Award Notice or the Plan, the Performance Shares will only be settled in shares of Common Stock and your Performance Shares may not be settled before the third anniversary of the Grant Date.

Exhibit 10.21

Finland

1. Withholding of Tax-Related Items. Notwithstanding anything in Section 8 of the Award Notice to the contrary, if you are a local national of Finland, any Tax-Related Items shall be withheld only in cash from your regular salary/wages or other amounts payable to you in cash or such other withholding methods as may be permitted under the Plan and allowed under local law.

Exhibit 10.21

France

1. English Language. You acknowledge and agree that it is your express intent that this Award Notice, the Plan and all other documents, notices and legal proceedings entered into, given or instituted pursuant to the Performance Shares, be drawn up in English. If you have received this Award Notice, the Plan, the Subplan or any other documents related to the Performance Shares translated into a language other than English, and if the meaning of the translated version is different than the English version, the English version will control.

Langue anglaise. Vous reconnaissez et consentez que c'est votre intention expresse que cet Accord, le Projet et tous les autres documents, les notifications et l'événement légal est entré dans, compte tenu de ou institué conformément à la Récompense de Award, est formulé dans l'anglais. Si vous avez reçu cet Accord, le Projet ou aucuns autres documents liés a relaté à la Récompense de Award traduite dans une langue autrement que l'anglais, et si le sens de la version traduite est différent de la version anglaise, la version anglaise contrôlera.

BY SIGNING BELOW, YOU ACKNOWLEDGE, UNDERSTAND AND AGREE TO THE PROVISIONS OF THE AWARD NOTICE, THE PLAN AND THIS ADDENDUM.

____

Signature

____

Printed Name

____

Date

IMPORTANT NOTE: THIS ADDENDUM MUST BE SIGNED AND RETURNED TO

Eastman Chemical B.V.
HR-Compensation and Benefits
Rotterdam, Netherlands

NO LATER THAN 90 DAYS FOLLOWING THE GRANT DATE.

Hong Kong

1. Securities Law Notification. WARNING: The Award Notice, this Addendum, the Plan and all other materials pertaining to the Performance Shares have not been reviewed by any regulatory authority in Hong Kong. You are advised to exercise caution in relation to the offer. If you have any doubts about any of the contents of the materials pertaining to the Performance Shares, you should obtain independent professional advice.

2. Wages. The Performance Shares and shares of Common Stock underlying the Performance Shares do not form part of your wages for purposes of calculating any statutory or contractual payments under Hong Kong law.

3. Nature of the Plan. The Company specifically intends that the Plan will not be treated as an occupational retirement scheme for purposes of the Occupational Retirement Schemes Ordinance (“ORSO”). To the extent a court, tribunal or legal/regulatory body in Hong Kong determines that the Plan constitutes an occupational retirement scheme for purposes of ORSO, the grant of the Performance Shares shall be null and void.

Malaysia

1. Consent to Collection, Processing and Transfer of Personal Data. This provision replaces Section 20 of the Award Notice in its entirety:

You hereby explicitly and unambiguously consent to the collection, use and transfer, in electronic or other form, of your personal data, as described in this Addendum and any other Performance Share grant materials by and among, as applicable, the Company and Affiliates and Subsidiaries for the exclusive purpose of implementing, administering and managing your participation in the Plan. *You understand that the Company and Affiliates and Subsidiaries may hold certain personal information about you, including, but not limited to, your name, home address, telephone number, email address and date of birth, social insurance, passport or other identification number, salary, nationality, job title, any Shares or directorships held in the Company, details of all Performance Shares or any other entitlement to Shares awarded, canceled, exercised, vested, unvested or outstanding in your favor, for the exclusive purpose of implementing, administering and managing the Plan (“Data”). The Data is supplied by the Company and also by you through information collected in connection with the Award Notice and the Plan.* *You understand that Data will be transferred to the current stock plan service providers or a stock plan service provider as may be selected by the Company in the future, which is assisting the Company with the implementation, administration and management of the Plan. You understand that the recipients of the Data may be located in the United States or elsewhere, and that the recipients’ country (e.g., the United States) may have different data privacy laws and protections than your country. You understand that if you reside outside the United States, you may request a list with the names and addresses of any potential recipients of the Data by contacting your local human resources representative. You authorize the Company, the stock plan service provider and any other possible recipients which may assist the Company (presently or in the future) with implementing, administering and managing the Plan to receive, possess, use, retain and transfer the Data, in electronic or other form, for the purposes of implementing, administering and managing your participation in the Plan, including any transfer of such Data as may be required to a broker, escrow agent or other third party with whom the Shares received upon vesting of the Performance Shares may be deposited. You understand that Data will be*	*Anda dengan ini secara eksplisit dan tanpa sebarang keraguan mengizinkan pengumpulan, penggunaan dan pemindahan, dalam bentuk elektronik atau lain-lain, data peribadi anda seperti yang diterangkan dalam Lampiran ini dan apa-apa bahan Performance Share yang lain oleh dan di antara, seperti yang berkenaan, Syarikat dan Ahli Gabungan dan Anuk untuk tujuan eksklusif bagi melaksanakan, mentadbir dan menguruskan penyertaan anda di dalam Pelan.* *Anda memahami bahawa Syarikat Ahli Gabungan dan Anuk mungkin memegang maklumat peribadi tertentu tentang anda, termasuk, tetapi tidak terhad kepada, nama anda, alamat rumah dan nombor telefon, alamat emel, tarikh lahir, insurans sosial, nombor pasport atau pengenalan lain, gaji, kewarganegaraan, jawatan, apa-apa Syer atau jawatan pengarah yang dipegang dalam Syarikat, butir-butir semua Performance Shares, atau apa-apa hak lain atas Syer yang dianugerahkan, dibatalkan, dilaksanakan, terletak hak, tidak diletak hak ataupun yang belum dijelaskan bagi faedahanda, untuk tujuan eksklusif bagi melaksanakan, mentadbir dan menguruskan Pelan tersebut ("Data"). Data tersebut dibekalkan oleh Syarikat dan juga oleh anda berkenaan dengan Notis Award dan Pelan.* *Anda memahami bahawa Data ini akan dipindahkan kepada pembekal perkhidmatan pelan saham semasa atau pembekal perkhidmatan pelan saham yang mungkin dipilih oleh Syarikat pada masa depan, yang membantu Syarikat dengan pelaksanaan, pentadbiran dan pengurusan Pelan. Anda memahami bahawa penerima-penerima Data mungkin berada di Amerika Syarikat atau mana-mana tempat lain, dan bahawa negara penerima-penerima (contohnya, Amerika Syarikat) mungkin mempunyai undang-undang privasi data dan perlindungan yang berbeza daripada negara anda. Anda memahami bahawa sekiranya anda menetap di luar Amerika Syarikat, anda boleh meminta satu senarai yang mengandungi nama-nama dan alamat-alamat penerima-penerima Data yang berpotensi dengan menghubungi wakil sumber manusia tempatan anda di. Anda memberi kuasa kepada Syarikat, pembekal perkhidmatan pelan saham dan mana-mana penerima-penerima kemungkinan lain yang mungkin akan membantu Syarikat (pada masa sekarang atau pada masa depan) dengan melaksanakan, mentadbir dan menguruskan Pelan untuk menerima, memiliki, menggunakan, mengekalkan dan memindahkan*

held only as long as is necessary to implement, administer and manage your participation in the Plan. You understand that if you reside outside the United States, you may, at any time, view Data, request additional information about the storage and processing of Data, require any necessary amendments to Data, limit the processing of Data or refuse or withdraw the consents herein, in any case without cost, by contacting in writing your local human resources representative. Further, you understand that you are providing the consent herein on a purely voluntary basis. If you do not consent, or if you later seek to revoke your consent, your employment status or service and career with the Company will not be adversely affected; the only adverse consequence of refusing or withdrawing your consent is that the Company may not be able to grant you Performance Shares or other equity awards or administer or maintain such awards. Therefore, you understand that refusing or withdrawing your consent may affect your ability to participate in the Plan. For more information on the consequences of your refusal to consent or withdrawal of consent, you understand that you may contact your local human resources representative.	*Data, dalam bentuk elektronik atau lain-lain, bagi tujuan melaksanakan, mentadbir dan menguruskan penyertaan anda di dalam Pelan, termasuk segala pemindahan Data tersebut sebagaimana yang dikehendaki kepada broker, egen eskrow atau pihak ketiga dengan siapa Saham diterima semasa peletakhakan Performance Shares mungkin didepositkan. Anda memahami bahawa Data hanya akan disimpan selagi ia adalah diperlukan untuk melaksanakan, mentadbir, dan menguruskan penyertaan anda dalam Pelan. Anda memahami bahawa sekiranya anda menetap di luar Amerika Syarikat, anda boleh, pada bila-bila masa, melihat Data, meminta maklumat tambahan mengenai penyimpanan dan pemprosesan Data, meminta bahawa pindaan-pindaan dilaksanakan ke atas Data, mengehadkan pemprosesan Data atau menolak atau menarik balik persetujuan dalam ini, dalam mana-mana kes, tanpa kos, dengan menghubungi secara bertulis wakil sumber manusia tempatan. Selanjutnya, anda memahami bahawa anda memberikan persetujuan di sini secara sukarela semata-mata. Sekiranya anda tidak bersetuju, atau sekiranya anda kemudian membatalkan persetujuan anda, status pekerjaan atau perkhidmatan dan kerjaya anda dengan Syarikat tidak akan terjejas; satu-satunya akibat buruk sekiranya anda tidak bersetuju atau menarik balik persetujuan andaadalah bahawa Syarikat tidak akan dapat memberikan Perforamance Shares kepada anda atau anugerah ekuiti lain atau mentadbir atau mengekalkan anugerah-anugerah tersebut. Oleh itu, anda memahami bahawa keengganan atau penarikan balik persetujuan anda boleh menjejaskan keupayaan anda untuk mengambil bahagian dalam Pelan. Untuk maklumat lebih lanjut mengenai akibat-akibat keengganan anda untuk memberikan keizinan atau penarikan balik keizinan, anda memahami bahawa anda boleh menghubungi wakil sumber manusia tempatan.*

BY SIGNING BELOW, YOU ACKNOWLEDGE, UNDERSTAND AND AGREE TO THE PROVISIONS OF THE AWARD NOTICE, THE PLAN AND THIS ADDENDUM.

____
Signature

____

Printed Name

____

Date

IMPORTANT NOTE: THIS ADDENDUM MUST BE SIGNED AND RETURNED TO

Singapore (ECAP)
Compensation and Benefits / Regional HR Manager
9 North Buona Visa Drive
Singapore 138588

NO LATER THAN 90 DAYS FOLLOWING THE GRANT DATE.

Mexico

1. Commercial Relationship. You expressly recognize that your participation in the Plan, and the Company's grant of the Performance Shares does not constitute an employment relationship between you and the Company. The Company has granted you the Performance Shares as a consequence of the commercial relationship between the Company and the Company's Subsidiary in Mexico that employs you (i.e., your Employer), and the Company's Subsidiary in Mexico is your sole employer. Based on the foregoing, you expressly recognize that (a) the Plan, the Subplan, and the benefits you may derive from your participation in the Plan does not establish any rights between you and your Employer, (b) the Plan, the Subplan, and the benefits you may derive from your participation in the Plan are not part of the employment conditions and/or benefits provided by your Employer, and (c) any modifications or amendments of the Plan or the Subplan by the Company, or a termination of the Plan or Subplan by the Company, shall not constitute a change or impairment of the terms and conditions of your employment with your Employer.

2. Extraordinary Item of Compensation. You expressly recognize and acknowledge that your participation in the Plan is a result of the discretionary and unilateral decision of the Company, as well as your free and voluntary decision to participate in the Plan in accord with the terms and conditions of the Plan, the Award Notice and this Addendum. As such, you acknowledge and agree that the Company may, in its sole discretion, amend and/or discontinue your participation in the Plan at any time and without any liability. The value of the Performance Shares is an extraordinary item of compensation outside the scope of your employment contract, if any. The Performance Shares are not part of your regular or expected compensation for purposes of calculating any severance, resignation, redundancy, end of service payments, bonuses, long-service awards, pension or retirement benefits, or any similar payments, which are the exclusive obligations of any Affiliate or Subsidiary.

BY SIGNING BELOW, YOU ACKNOWLEDGE, UNDERSTAND AND AGREE TO THE PROVISIONS OF THE AWARD NOTICE, THE PLAN AND THIS ADDENDUM.

____

Signature

____

Printed Name

____

Date

IMPORTANT NOTE: THIS ADDENDUM MUST BE SIGNED AND RETURNED TO

HR Manager
Santo Toribio - MEXICO

NO LATER THAN 90 DAYS FOLLOWING THE GRANT DATE.

Exhibit 10.21

Netherlands

1. Waiver of Termination Rights. In consideration of the grant of your Award, you agree that you waive any and all rights to compensation or damages as a result of any termination of employment for any reason whatsoever, insofar as those rights result or may result from (a) the loss or diminution in value of such rights or entitlements under the Plan or the Subplan, or (b) you cease to have rights under, or ceasing to be entitled to any awards under the Plan or Subplan as a result of such termination.

Singapore

1. Qualifying Person Exemption. The following provision shall supplement Section 21 of the Award Notice:

The grant of the Performance Shares under the Plan is being made pursuant to the “Qualifying Person” exemption” under section 273(1)(f) of the Securities and Futures Act (Chapter 289, 2006 Ed.) (“SFA”). The Plan or the Subplan have not been and will not be lodged or registered as a prospectus with the Monetary Authority of Singapore and are not regulated by any financial supervisory authority pursuant to any legislation in Singapore. You should note that, as a result, the Performance Shares are subject to section 257 of the SFA and accordingly, you will be unable to make (a) any subsequent sale of any shares of Common Stock pursuant to the Performance Shares in Singapore or (b) any offer of sale of any shares of Common Stock acquired as a result of the Performance Shares in Singapore, unless such sale or offer is made pursuant to the exemptions under Part XIII Division (1) Subdivision (4) (other than section 280) of the SFA (Chapter 289, 2006 Ed.).

South Korea

1. Consent to Collection, Processing and Transfer of Personal Data. The following provision shall replace Section 20 of the Award Notice in its entirety:

Pursuant to applicable personal data protection laws, the Company hereby notifies you of the following in relation to your personal data and the collection, processing and transfer of such data in relation to the Company's grant of Performance Shares and your participation in the Plan. The collection, processing and transfer of your personal data is necessary for the Company's administration of the Plan and your participation in the Plan, and although you have the right to deny or object to the collection, processing and transfer of personal data, your denial and/or objection to the collection, processing and transfer of personal data may affect your participation in the Plan. As such, you voluntarily acknowledge and consent (where required under applicable law) to the collection, use, processing and transfer of personal data as described herein. The Company shall retain and use your personal data until the purpose of the collection and use of your personal data is accomplished and shall promptly destroy your personal data thereafter.

The Company holds certain personal information about you, including your name, home address, email address and telephone number, date of birth, social security number (resident registration number) or other employee identification number, salary, nationality, job title, any Shares or directorships held in the Company, details of all Performance Shares, options or any other entitlement to Shares awarded, canceled, purchased, vested, unvested or outstanding in your favor, for the purpose of managing and administering the Plan (the "Data"). The Data may be provided by you or collected, where lawful, from third parties, and the Company will process the Data for the exclusive purpose of implementing, administering and managing your participation in the Plan. The Data processing will take place through electronic and non-electronic means according to logics and procedures strictly correlated to the purposes for which the Data is collected and with confidentiality and security provisions as set forth by applicable laws and regulations in your country of residence (and country of employment, if different). Data processing operations will be performed minimizing the use of personal and identification data when such operations are unnecessary for the processing purposes sought. The Data will be accessible within the Company's organization only by those persons requiring access for purposes of the implementation, administration and operation of the Plan and for your participation in the Plan.

The Company will transfer the Data internally as necessary for the purpose of implementation, administration and management of your participation in the Plan, and the Company may further transfer the Data to any third parties assisting the Company in the implementation, administration and management of the Plan. The third party recipients of the Data may be any Affiliates or Subsidiaries of the Company and / or Fidelity Stock Plan Services, LLC ("Fidelity") or any successor or any other third party that the Company or Fidelity (or its successor) may engage to assist with the implementation, administration and management of the Plan from time to time. These recipients may be located in the European Economic Area, or elsewhere throughout the world, such as the United States. You hereby authorize (where required under applicable law) them to receive, possess, use, retain and transfer the Data, in electronic or other form, for purposes of implementing, administering and managing your participation in the Plan, including any requisite transfer of such Data as may be required for the administration of the Plan and/or the subsequent holding of shares of Common Stock on your behalf to a broker or other third party with whom you may elect to deposit any shares of Common Stock acquired pursuant to the Plan. Such third parties to which the Company will transfer your personal data shall retain and use your personal data until the purpose of the collection and use of your personal data is accomplished and shall promptly destroy your personal data thereafter.

The Company and any third party recipient of the Data will use, process and store the Data only to the extent they are necessary for the purposes described above.

You may, at any time, exercise your rights provided under applicable personal data protection laws, which may include the right to (a) obtain confirmation as to the existence of the Data, (b) verify the content, origin and accuracy of the Data, (c) request the integration, update, amendment, deletion, or blockage (for breach of applicable laws) of the Data, (d) to oppose, for legal reasons, the collection, processing or transfer of the Data which is not necessary or required for the implementation, administration and/or operation of the Plan and your participation in the Plan, and (e) withdraw your consent to the collection, processing or transfer of Data as provided hereunder (in which case, your Performance Shares will be null and void). You may seek to exercise these rights by contacting your local Human Resources manager or the Company's Human Resources Department.

BY SIGNING BELOW, YOU ACKNOWLEDGE, UNDERSTAND AND AGREE TO THE PROVISIONS OF THE AWARD NOTICE, THE PLAN AND THIS ADDENDUM. SPECIFICALLY, YOU AGREE TO THE:

1) COLLECTION AND USE OF YOUR PERSONAL DATA.

2) PROVISION OF YOUR PERSONAL DATA TO A THIRD PART AND TRANSFER OF YOUR PERSONAL DATA OVERSEAS.

3) PROCESSING OF YOUR UNIQUE IDENTIFYING INFORMATION (RESIDENT REGISTRATION NUMBER).

____

Signature

____

Printed Name

____

Date

IMPORTANT NOTE: THIS ADDENDUM MUST BE SIGNED AND RETURNED TO

Singapore (ECAP)
Compensation and Benefits / Regional HR Manager
9 North Buona Visa Drive
Singapore 138588

NO LATER THAN 90 DAYS FOLLOWING THE GRANT DATE.

Spain

1. Securities Law Notice. The Performance Shares and the shares of Common Stock described in the Award Notice do not qualify under Spanish regulation as securities. No "offer of securities to the public," as defined under Spanish law, has taken place or will take place in the Spanish territory. The Award Notice has not been nor will it be registered with the Comisión Nacional del Mercado de Valores, and does not constitute a public offering prospectus.

2. Acknowledgement of Discretionary Nature of the Plan; No Vested Rights. By accepting the Performance Shares, you hereby consent to participation in the Plan and acknowledge receipt of a copy of the Plan.

You understand that the Company has unilaterally, gratuitously and in its sole discretion granted the Performance Shares under the Plan to individuals who may be employees of the Company or its Affiliates throughout the world. The decision is a limited decision that is entered into upon the express assumption and condition that any grant will not economically or otherwise bind the Company or any of its Affiliates on an ongoing basis. Consequently, you understand that the Performance Shares are granted on the assumption and condition that the Performance Shares and the shares of Common Stock acquired upon settlement of the Performance Shares shall not become a part of any employment contract (either with the Company or any of its Affiliates) and shall not be considered a mandatory benefit, salary for any purposes (including severance compensation) or any other right whatsoever. In addition, you understand that this grant would not be made but for the assumptions and conditions referenced above; thus, you acknowledge and freely accept that should any or all of the assumptions be mistaken or should any of the conditions not be met for any reason the Performance Shares shall be null and void.

You understand and agree that, as a condition of the Performance Shares, unless otherwise provided in the Award Notice, any unvested Performance Shares as of the date you cease active employment will be forfeited without entitlement to the underlying shares of Common Stock or to any amount of indemnification in the event of termination of your employment. You acknowledge that you have read and specifically accept the conditions referred to in the Award Notice regarding the impact of a termination of employment on the Performance Shares.

3. Termination for Cause. Notwithstanding anything to the contrary in the Plan or the Award Notice, “Cause” shall be defined as set forth in the Plan, regardless of whether the termination is considered a fair termination (i.e., “despido procedente”) under Spanish legislation.

BY SIGNING BELOW, YOU ACKNOWLEDGE, UNDERSTAND AND AGREE TO THE TERMS AND CONDITIONS OF THE PLAN, YOUR AWARD NOTICE AND THIS ADDENDUM.

____

Signature

____

Printed Name

____

Date

IMPORTANT NOTE: THIS ADDENDUM MUST BE SIGNED AND RETURNED TO

Eastman Chemical B.V.
HR-Compensation and Benefits
Rotterdam, Netherlands

NO LATER THAN 90 DAYS FOLLOWING THE GRANT DATE.

Switzerland

1. Securities Law Notification. The grant of the Performance Shares is not considered a public offering in Switzerland; therefore, it is not subject to registration in Switzerland. Neither this document nor any other materials relating to the Performance Shares constitutes a prospectus as such term is understood pursuant to article 652a of the Swiss Code of Obligations, and neither this document nor any other materials relating to the Performance Shares may be publicly distributed nor otherwise made publicly available in Switzerland. Neither this document nor any other offering or marketing materials relating to the Performance Shares have been or will be filed with, or approved or supervised by, any Swiss regulatory authority (in particular, the Swiss Financial Market Supervisory Authority (FINMA)).

United Kingdom

1. Income Tax and Social Insurance Contribution Withholding. The following provision shall supplement Section 8 of the Award Notice:

Without limitation to Section 8 of the Award Notice, you expressly agree that you are liable for all Tax-Related Items and hereby covenant to pay all such Tax-Related Items as and when requested by the Company, the Employer or Her Majesty’s Revenue and Customs (“HMRC”) (or any other tax authority or any other relevant authority). You also expressly agree to indemnify and keep indemnified the Company and the Employer against any Tax-Related Items that they are required to pay or withhold or have paid or will pay to HMRC (or any tax authority or any other relevant authority) on your behalf.

2. Exclusion of Claim. You acknowledge and agree that you will have no entitlement to compensation or damages insofar as such entitlement arises or may arise from your ceasing to have rights under or to be entitled to the Performance Shares, whether or not as a result of your own termination of employment (whether the termination is breach of contract or otherwise) or from the loss or diminution in value of the Performance Shares. Upon the grant of the Performance Shares, you shall be deemed irrevocably to have waived any such entitlement.

* * * * *

EXHIBIT A

2020-2022 Performance Share Award Payout Performance Measures Multiplier Table

Return on Invested Capital (ROIC) % Performance						
Eastman TSR Relative to Comparison Group rTSR	≥ 6.51 to 7.50	7.51 to 8.50	8.51 to 9.50	9.51 to 10.50	10.51 to 11.50	>11.51
5th quintile	0.0	0.0	0.0	0.2	0.3	0.4
4th quintile	0.0	0.2	0.4	0.6	0.8	0.9
3rd quintile <50%	0.4	0.6	0.8	1.0	1.2	1.4
3rd quintile ≥ 50%	0.6	0.8	1.0	1.3	1.5	1.7
2nd quintile	1.0	1.2	1.4	1.7	1.9	2.1
1st quintile	1.0	1.8	2.0	2.3	2.4	2.5

EASTMAN CHEMICAL COMPANY SUBSIDIARIES

NAME OF SUBSIDIARY	JURISDICTION OF INCORPORATION OR ORGANIZATION
Commonwealth Laminating & Coating (Hong Kong) Limited	Hong Kong
CP Films Vertriebs GmbH	Germany
Crown Operations International, LLC	Delaware
Eastman Administración, S.A. de C.V.	Mexico
Eastman Chemical (Barbados) SRL	Barbados
Eastman Chemical (China) Co., Ltd.	China
Eastman Chemical (China) Co., Ltd. - Guangzhou Branch	Guangzhou
Eastman Chemical (Malaysia) Sdn. Bhd.	Malaysia
Eastman Chemical (Nanjing) Co., Ltd.	China
Eastman Chemical (PPU) Pte. Ltd.	Singapore
Eastman Chemical Adhesives (Hong Kong) Limited	Hong Kong
Eastman Chemical Advanced Materials B.V.	Netherlands
Eastman Chemical AMI GmbH	Switzerland
Eastman Chemical AMI LLC	Massachusetts
Eastman Chemical AP Holdings B.V.	Netherlands
Eastman Chemical Argentina S.R.L.	Argentina
Eastman Chemical Australia Pty LTD - New Zealand Branch	New Zealand
Eastman Chemical Australia Pty. Ltd.	Australia
Eastman Chemical B.V.	Netherlands
Eastman Chemical B.V. - Czech Republic Representative Office	Czech Republic
Eastman Chemical B.V. - Denmark Branch	Denmark
Eastman Chemical B.V. - France Branch	France
Eastman Chemical B.V. - Hungarian Commercial Representative Office	Hungary
Eastman Chemical B.V. - Poland Representative Office	Poland
Eastman Chemical B.V. - South Africa Representative Office	South Africa
Eastman Chemical B.V., The Hague, Zug Branch	Switzerland
Eastman Chemical Barcelona, S.L.	Spain
Eastman Chemical Canada, Inc.	Ontario
Eastman Chemical Company Investments, Inc.	Delaware
Eastman Chemical do Brasil Ltda.	Brazil
Eastman Chemical EMEA B.V.	Netherlands
Eastman Chemical Europe S.a.r.l. (Branch)	United Arab Emirates
Eastman Chemical Europe S.a.r.l.	Luxembourg
Eastman Chemical Fibers IP GmbH	Switzerland
Eastman Chemical Fibers IP LLC	Massachusetts
Eastman Chemical Finance CN S.a.r.l.	Luxembourg
Eastman Chemical Finance EUR S.a.r.l.	Luxembourg
Eastman Chemical Finance GBP S.a.r.l.	Luxembourg
Eastman Chemical Finance SGD S.a.r.l.	Luxembourg
Eastman Chemical Finance USD S.a.r.l.	Luxembourg
Eastman Chemical Financial Corporation	Delaware
Eastman Chemical GDL S.a.r.l.	Luxembourg
Eastman Chemical Germany Holdings GmbH & Co. KG	Germany
Eastman Chemical Germany Management GmbH & Co. KG	Germany
Eastman Chemical Germany Verwaltungs-GmbH	Germany
Eastman Chemical Global Holdings LLC	Texas
Eastman Chemical Global Holdings S.a.r.l.	Luxembourg

EASTMAN CHEMICAL COMPANY SUBSIDIARIES

NAME OF SUBSIDIARY	JURISDICTION OF INCORPORATION OR ORGANIZATION
Eastman Chemical Global Holdings S.a.r.l. - Foreign Branch	United Arab Emirates
Eastman Chemical GmbH	Germany
Eastman Chemical HK Limited	Hong Kong
Eastman Chemical Holdings do Brasil Ltda.	Brazil
Eastman Chemical Hong Kong B.V.	Netherlands
Eastman Chemical HTF GmbH	Germany
Eastman Chemical Iberica, S.L.	Spain
Eastman Chemical India Private Limited	India
Eastman Chemical Intermediates (Hong Kong) Limited	Hong Kong
Eastman Chemical International GmbH	Switzerland
Eastman Chemical International Holdings B.V.	Netherlands
Eastman Chemical International LP, LLC	Delaware
Eastman Chemical Japan Ltd.	Japan
Eastman Chemical Korea B.V.	Netherlands
Eastman Chemical Korea, Ltd.	Korea
Eastman Chemical Latin America, Inc.	Delaware
Eastman Chemical Ltd.	New York
Eastman Chemical Ltd. - Australia Branch	Australia
Eastman Chemical Ltd. - Singapore Branch	Singapore
Eastman Chemical Ltd. - Taiwan Branch	Taiwan
Eastman Chemical Luxembourg 3 S.a.r.l.	Luxembourg
Eastman Chemical Luxembourg Finance S.a.r.l.	Luxembourg
Eastman Chemical Luxembourg Holdings 1 LLC	Texas
Eastman Chemical Luxembourg Holdings 1 S.a.r.l.	Luxembourg
Eastman Chemical Luxembourg Holdings LLC	Delaware
Eastman Chemical Luxembourg Holdings S.a.r.l.	Luxembourg
Eastman Chemical Malaysia B.V.	Netherlands
Eastman Chemical Middelburg B.V.	Netherlands
Eastman Chemical Netherlands Limited	United Kingdom
Eastman Chemical Products Singapore Pte. Ltd.	Singapore
Eastman Chemical Regional UK	England
Eastman Chemical Resins, Inc.	Delaware
Eastman Chemical S.C.S.	Luxembourg
Eastman Chemical Singapore Pte. Ltd.	Singapore
Eastman Chemical Switzerland GmbH	Switzerland
Eastman Chemical Switzerland LLC	Tennessee
Eastman Chemical Technology BVBA	Belgium
Eastman Chemical Texas City, Inc.	Delaware
Eastman Chemical Uruapan, S.A. de C.V.	Mexico
Eastman Chemical US Finance LLC	Delaware
Eastman Chemical Workington Limited	England
Eastman Chemical, Asia Pacific Pte. Ltd.	Singapore
Eastman Chemical, Asia Pacific Pte. Ltd. - Vietnam Representative Office	Vietnam
Eastman Chemical, Europe, Middle East and Africa LLC	Delaware
Eastman Cogen Management L.L.C.	Texas
Eastman Cogeneration L.P.	Texas
Eastman Company UK Limited	England

Exhibit 21.01

EASTMAN CHEMICAL COMPANY SUBSIDIARIES

NAME OF SUBSIDIARY	JURISDICTION OF INCORPORATION OR ORGANIZATION
Eastman de Argentina S.R.L.	Argentina
Eastman Fibers Korea Limited	Korea
Eastman Fibers Singapore Pte. Ltd.	Singapore
Eastman Foundation	Tennessee
Eastman France S.a.r.l.	France
Eastman Global Holdings, Inc.	Delaware
Eastman International Holdings, LLC	Delaware
Eastman International Management Company	Tennessee
Eastman Italia S.r.l.	Italy
Eastman Kimya Sanayi ve Ticaret Limited Sirketi	Turkey
Eastman LAR Distribucion, S. de R.L. de C.V.	Mexico
Eastman Mazzucchelli Hong Kong Limited	Hong Kong
Eastman Mazzucchelli Plastics (Shenzhen) Company Limited	China
Eastman MFG Japan Ltd.	Japan
Eastman Performance Films Canada, Inc.	British Columbia
Eastman Performance Films, LLC	Delaware
Eastman Shuangwei Fibers Company Limited (45%)	China
Eastman Spain L.L.C.	Delaware
Eastman Specialties Corporation	Delaware
Eastman Specialties Holdings Corporation	Delaware
Eastman Specialties OU	Estonia
Eastman Specialties S.a.r.l.	Luxembourg
Eastman Specialties Wuhan Youji Chemical Co., Ltd (51%)	China
Ecuataminco S.A.	Ecuador
Flexsys America L.P.	Delaware
Flexsys America LLC	Delaware
Flexsys Chemicals (M) Sdn Bhd	Malaysia
Flexsys Rubber Chemicals Limited	United Kingdom
Flexsys Verkauf GmbH	Germany
Flexsys Verwaltungs- und Beteiligungsgesellschaft mbH	Germany
HDK Industries, Inc.	Tennessee
Holston Defense Corporation	Virginia
Huper Optik International Pte. Ltd.	Singapore
Industriepark Nienburg GmbH	Germany
Kingsport Hotel, L.L.C.	Tennessee
Knowlton Technologies, LLC	Delaware
Monchem International LLC	Delaware
Mustang Pipeline Company	Texas
Nanjing Yangzi Eastman Chemical Ltd (50%)	China
Novomatrix International Trading (Shanghai) Co. Ltd.	Shanghai
Novomatrix, Inc.	Delaware
Qilu Eastman Specialty Chemicals, Ltd. (51%)	China
S E Investment LLC	Delaware
Sakra Hyco Pte. Ltd.	Singapore
Sakra Island Carbon Dioxide Pte Ltd (50%)	Singapore
Scandiflex do Brasil Ltda.	Brazil
Solchem Netherlands C.V.	Netherlands

Exhibit 21.01

EASTMAN CHEMICAL COMPANY SUBSIDIARIES

NAME OF SUBSIDIARY	JURISDICTION OF INCORPORATION OR ORGANIZATION
Solchem, S.a.r.l.	Lux
Solutia (Thailand) Ltd.	Thailand
Solutia Brasil Ltda.	Brazil
Solutia Canada Inc.	Canada
Solutia Chemicals India Private Limited	India
Solutia Chemicals India Private Limited - Branch	Singapore
Solutia Deutschland GmbH	Germany
Solutia Europe BVBA - Portugal Representative Office	Portugal
Solutia Europe BVBA - Russia Representative Office	Russia
Solutia Europe BVBA/SPRL	Belgium
Solutia Greater China, LLC	Delaware
Solutia Hong Kong Limited	Hong Kong
Solutia Inc.	Delaware
Solutia International Trading (Shanghai) Co., Ltd.	Shanghai, China
Solutia Performance Products (Suzhou) Co., Ltd.	China
Solutia Performance Products Solutions, Ltd	Mauritius
Solutia Singapore Pte. Ltd.	Singapore
Solutia Therminol Co., Ltd. Suzhou	China
Solutia Tlaxcala, S.A. de C.V.	Mexico
Solutia UK Holdings Limited	United Kingdom
Solutia UK Investments Limited	United Kingdom
Solutia UK Limited	United Kingdom
Solutia Venezuela, S.R.L.	Venezuela
Southwall Europe GmbH	Germany
Southwall Insulating Glass, LLC	Delaware
Southwall Technologies Inc.	Delaware
St. Gabriel CC Company, LLC	Delaware
SunTek Australia Pty. Ltd.	Australia
SunTek UK Limited	United Kingdom
Taminco Argentina S.A.	Argentina
Taminco BVBA	Belgium
Taminco BVBA - The Philippines	Phillippines
Taminco Chile SpA	Chile
Taminco Choline Chloride (Shanghai) Co., Ltd.	Shanghai, China
Taminco Corporation	Delaware
Taminco de Guatemala, S.A.	Guatemala
Taminco do Brasil Produtos Quimicos Ltda.	Brazil
Taminco Finland Oy	Finland
Taminco Germany GmbH	Germany
Taminco Global Chemical LLC	Delaware
Taminco Group BVBA	Belgium
Taminco Group Holdings S.a.r.l.	Luxembourg
Taminco Holding Netherlands B.V.	Netherlands
Taminco Intermediate LLC	Delaware
Taminco Limitada	Costa Rica
Taminco Mexico S. de R.L. de C.V.	Mexico
Taminco Uruguay S.A.	Uruguay

Exhibit 21.01

EASTMAN CHEMICAL COMPANY SUBSIDIARIES

NAME OF SUBSIDIARY	JURISDICTION OF INCORPORATION OR ORGANIZATION
Taminco US LLC	Delaware
TX Energy, LLC	Delaware
V-Kool International Pte. Ltd.	Singapore
Yixing Taminco Feed Additives Co., Ltd.	China

Exhibit 23.01

Consent of Independent Registered Public Accounting Firm

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (Nos. 333-124558, 333-170248 and 333-195103) and in the Registration Statement on Form S-3 (No. 333-225564) of Eastman Chemical Company of our report dated February 26, 2020 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
Cincinnati, Ohio
February 26, 2020

EASTMAN

Exhibit 31.01

EASTMAN CHEMICAL COMPANY AND SUBSIDIARIES

Rule 13a - 14(a)/15d - 14(a) Certifications

I, Mark J. Costa, certify that:

1. I have reviewed this Annual Report on Form 10-K of Eastman Chemical Company;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 26, 2020

/s/ Mark J. Costa
Mark J. Costa
Chief Executive Officer

Exhibit 31.02

EASTMAN CHEMICAL COMPANY AND SUBSIDIARIES

Rule 13a - 14(a)/15d - 14(a) Certifications

I, Curtis E. Espeland, certify that:

1. I have reviewed this Annual Report on Form 10-K of Eastman Chemical Company;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 26, 2020

/s/ Curtis E. Espeland
Curtis E. Espeland
Executive Vice President and Chief Financial Officer

EASTMAN

Exhibit 32.01

EASTMAN CHEMICAL COMPANY AND SUBSIDIARIES

Section 1350 Certifications

In connection with the Annual Report of Eastman Chemical Company (the "Company") on Form 10-K for the period ending December 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of the Company certifies, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to such officer's knowledge:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of the dates and for the periods expressed in the Report.

A signed original of this written statement required by Section 906 has been provided to Eastman Chemical Company and will be retained by Eastman Chemical Company and furnished to the Securities and Exchange Commission or its staff upon request.

Date: February 26, 2020

/s/ Mark J. Costa
Mark J. Costa
Chief Executive Officer

The foregoing certification is being furnished solely pursuant to 18 U.S.C. §1350 and is not being filed as part of the Report or as a separate disclosure document.

EASTMAN

Exhibit 32.02

EASTMAN CHEMICAL COMPANY AND SUBSIDIARIES

Section 1350 Certifications

In connection with the Annual Report of Eastman Chemical Company (the "Company") on Form 10-K for the period ending December 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of the Company certifies, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to such officer's knowledge:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of the dates and for the periods expressed in the Report.

A signed original of this written statement required by Section 906 has been provided to Eastman Chemical Company and will be retained by Eastman Chemical Company and furnished to the Securities and Exchange Commission or its staff upon request.

Date: February 26, 2020

/s/ Curtis E. Espeland
Curtis E. Espeland
Executive Vice President and Chief Financial Officer

The foregoing certification is being furnished solely pursuant to 18 U.S.C. §1350 and is not being filed as part of the Report or as a separate disclosure document.

Exhibit 99.01

2019 Company and Segment Sales Revenue by End-Use Market

Additives & Functional Products

2019 revenue by end-use market

Advanced Materials

2019 revenue by end-use market

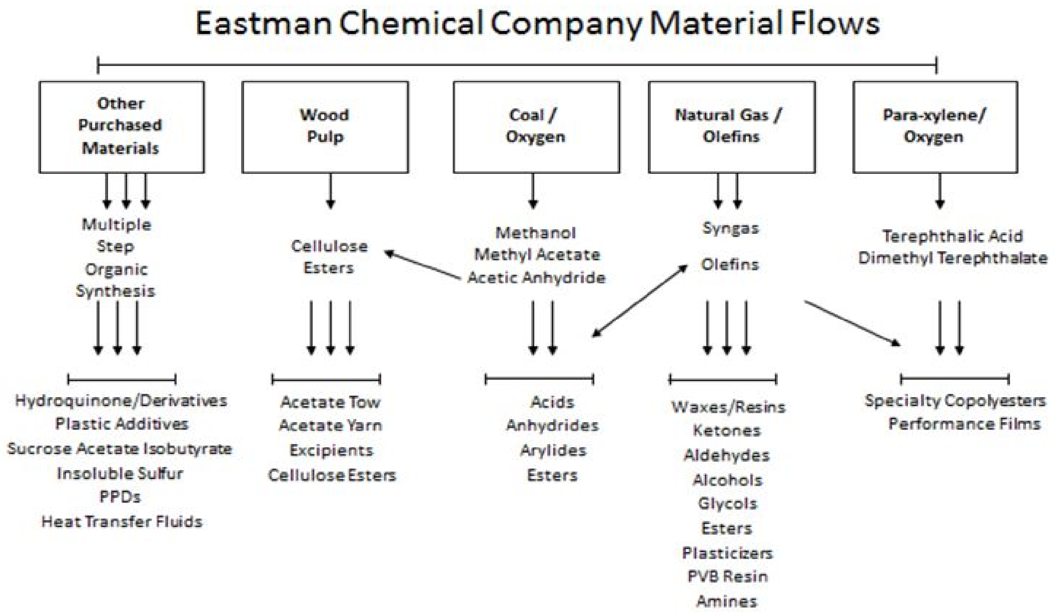
Chemical Intermediates

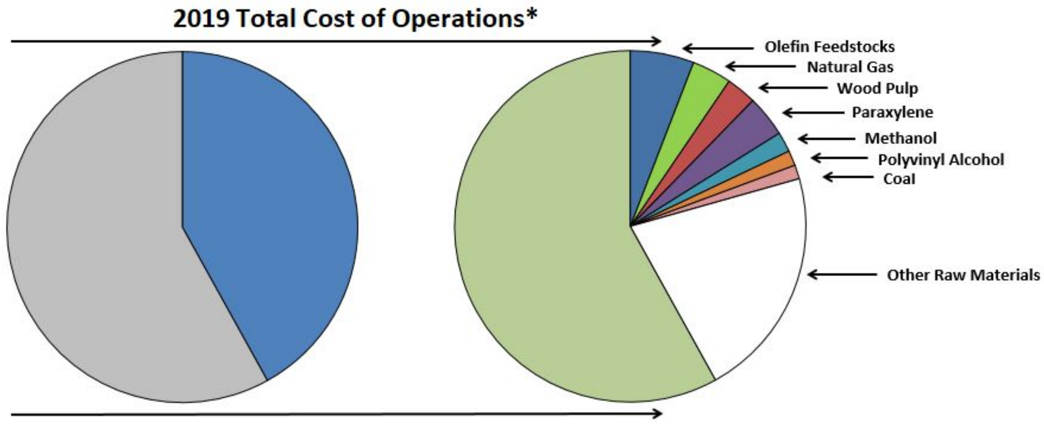
2019 revenue by end-use market

Corporate

2019 revenue by end-use market

EASTMAN





*Total Cost of Operations defined as sales less earnings before interest and taxes excluding non-core and unusual items.
Non-core and unusual items are defined in "Management's Discussion and Analysis of Financial Condition
Results of Operations - Non-GAAP Financial Measures" in Part II, Item 7 of the 2019 Annual Report on Form 10-K.